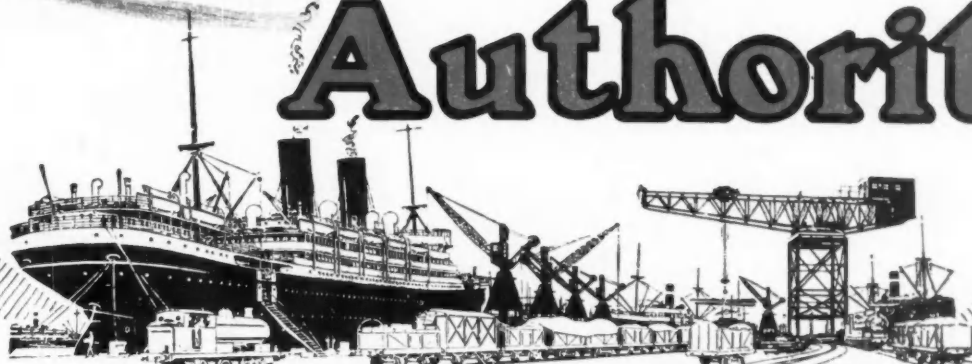


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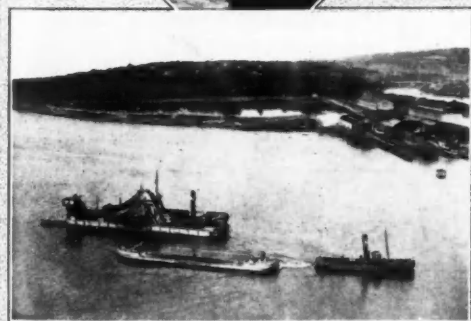
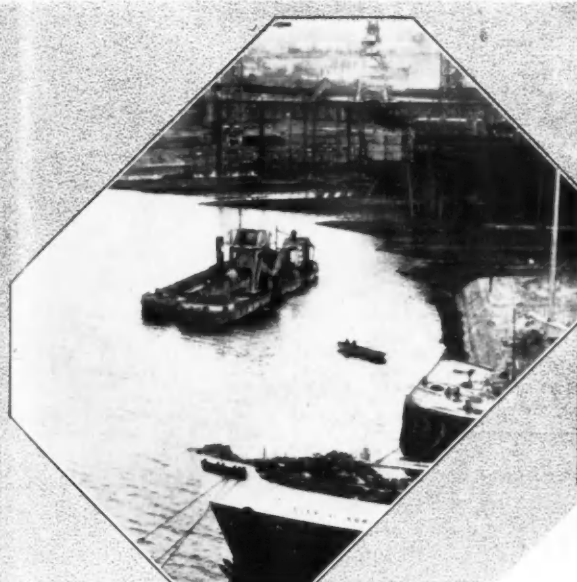
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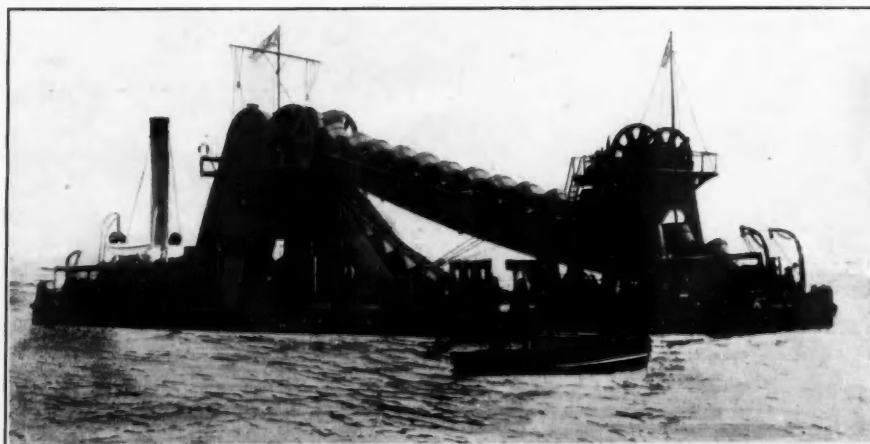
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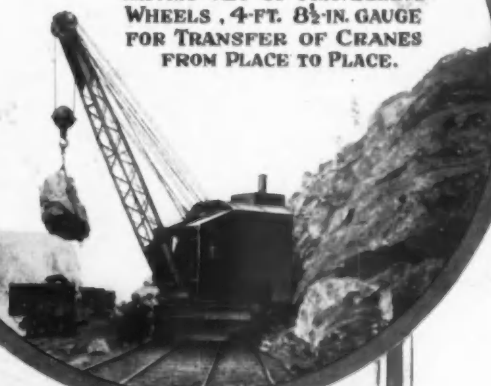


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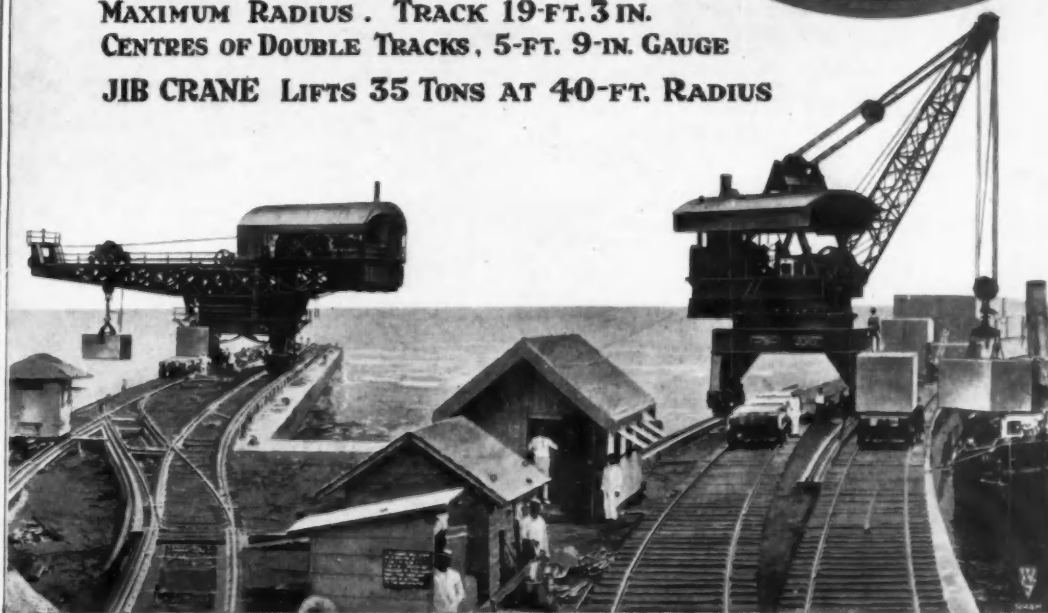
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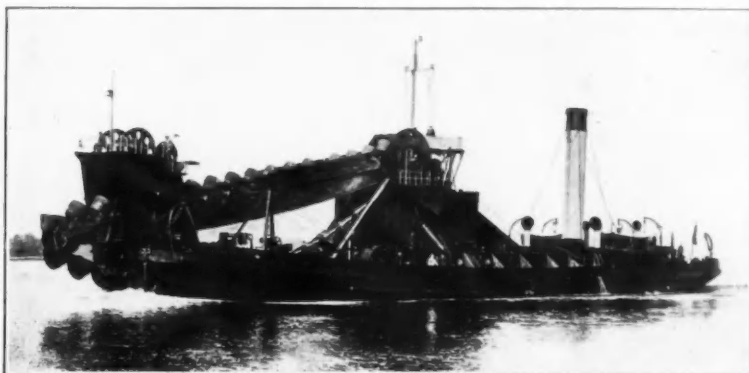
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THE DOCK AND HARBOUR AUTHORITY

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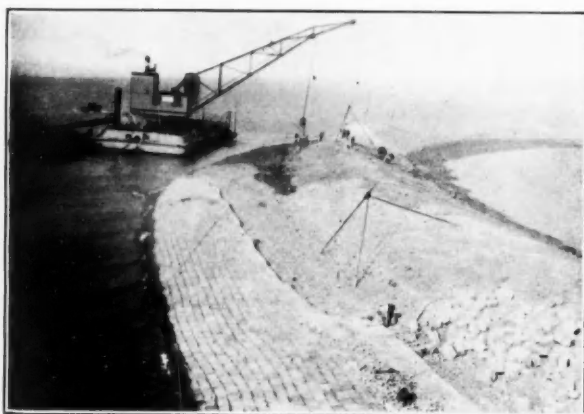
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DECEMBER, 1941

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Editorial Comments

The Hong Kong Report.

The Report by the late Sir David Owen, completed just before his death, on the Future Administration and Control of the Port of Hong Kong, has already received some preliminary notice in a previous issue (October, 1941), of this Journal. We are now in a position, thanks to the courtesy of the Colonial Office, to publish the report in full, as promised. It will be generally agreed that it is a comprehensive and well-balanced review of the trading and maritime conditions obtaining at the outstanding British port and colony in Far Eastern waters, and that it provides a carefully thought-out scheme for meeting those conditions to better effect in the future than has proved possible heretofore. Obviously, it will meet with, indeed has already met with, criticisms in various respects, both at home and abroad, but it is undoubtedly a document which carries great weight and it will be read with interest and attention by port officials everywhere.

The immediate occasion for the official visit to Hong Kong of the former General Manager of the Port of London Authority was the fact that at no distant date a number of pier leases at the port will expire. The leasing of the piers at Hong Kong to private undertakings for exploitation has hitherto been the main feature of port policy, dating back over a long period of years, and it is felt that the present is a suitable opportunity, prior to further renewals, to decide whether to continue the practice, or to adopt some alternative system.

It will be seen that the Report recommends a clean cut with the past. Sir David found the administration of the port carried on along somewhat anomalous lines. There is in existence (though it might almost be said in abeyance) a nominal harbour advisory body, composed largely of government and civil service nominees, which rarely meets, and, in fact, has practically ceased to function. The port is not being worked as an independent concern, but as a branch of the civil administration of the colony, with the engineering side forming a sub-division of the Department of Public Works, while the executive functions of the Harbour Master are, in Sir David's words, "wider than those usually performed by a harbour master." Reading between the lines the conclusion may legitimately be reached that, as regards supervision of the port, the Harbour Master is in effective, if not absolute, control.

Sir David felt that a change was desirable and proposed the creation of a properly representative Harbour Board. The composition of the body recommended for future control of the administration of the port (which will be found in the next instalment of the Report), naturally to some extent reflects the result of Sir David's practical experience as a leading executive official at several British ports which are run on autonomous lines. The principle of local representative government has already commanded his whole-hearted approval, and he instances a number of ports in various parts of the British Empire where the system is in successful operation. There is, of course, a wide range of composition in such bodies and the model chosen for Hong Kong inclines more to British-Indian examples than to those in the United Kingdom. This is, no doubt, natural and proper, having regard to the fact that variations in race, language and custom

make a wide difference in the carrying out of ideals, which, in themselves, are on a common basis. The democratic electorates, as constituted at British homeland ports, would scarcely be practicable in China.

For comparison with the Board outlined in the Report, it may be interesting to sketch the composition of the Port Trust for the metropolitan port of Calcutta. On this, there are, at present, seven ex-officio members and twelve elected members. Included in the former category are the chairman (appointed by the Local Government), the deputy-chairman (appointed by the Commissioners, subject to the approval of the Local Government), the respective Agents of three Bengal Railway Companies, the Collector of Customs for the port and the Port Officer. Of the twelve elected members, six are elected by the Bengal Chamber of Commerce, one by the Calcutta Trades Association, one by the Corporation of Calcutta and four by such bodies as the Local Government select as best representing the interests of the Indian Mercantile Community (for the year 1939-40, two were elected by the Bengal National Chamber of Commerce, one by the Muslim Chamber of Commerce and one by the Indian Chamber of Commerce).

If Sir David Owen's recommendations are approved, the Hong Kong Commission will be a much smaller body, comprising seven members only, as against nineteen at Calcutta; and it will perhaps be felt that this is a somewhat drastic reduction, especially when brought into comparison with numbers ranging from 20 to 40 at homeland ports. But, no doubt, it represents the nearest approach to representative democratic control consistent with the less developed conditions of a semi-Oriental community. At a distance, without the requisite information on the point, it is difficult to judge.

Opinions on the report, as expressed in this country, are divided and conflicting. On the one hand, a leading shipping journal gives publicity to the views of a "prominent shipowner," which were to the effect that the recommendations "struck him with terror." The journal itself says that "the report contains numerous suggestions which, if adopted, may well ruin what has hitherto been one of the best ports in Eastern waters." On the other hand, we have the direct testimony of a well-known firm of shipowners doing a considerable trade with Hong Kong, that the proposals appear to them "as sensible and level-headed and as paying due regard to the history of the port's development and the peculiar local features."

At this stage we must content ourselves with placing these contradictory opinions on record. We may return at a later date to further consideration of the subject when the views of parties locally interested are more fully known. It is highly important to the future welfare of the port that proposals of such far-reaching effect should be subjected to close and careful scrutiny.

Select Committee's Report on Port Administration.

The Select Committee on National Expenditure in their recently issued 24th Report for the 1940-41 session, devote three paragraphs to the subject of Administration at the Ports, in which they state that their Sub-Committee have completed a series of visits to the principal ports and mercantile shipyards, where they found,

Editorial Comments—continued

in every area visited, evidence that considerable improvements in the turn-round of shipping and the dispersal of goods from vulnerable areas (as far as facilities permitted) had followed the appointment of Regional Port Directors at the more important ports. The existence of such an executive director (with the authority of the Minister) has, they say, reduced to a great extent overlapping and confliction of interests between Departments. Many ports, it is added, are now in a position to deal with an increased volume of shipping. This announcement is highly satisfactory, though the general commendation is qualified by the warning that there is still room for clarification of responsibility in certain respects, as, for example, in regard to fire prevention measures.

The Sub-Committee state that they have received particulars of remarkably good performances in the loading and unloading of ships and call attention to the fact that, given good feeling and a sense of national duty, a very high rate of performance can be attained and maintained. They urge that it is as imperative as ever that all who are engaged in or about dock undertakings should realise their national obligation, and strive to release ships from port rapidly.

Attention is further directed to the matter of Canteens in port areas. Much labour and expense has been incurred in the provision of new canteens, but the Sub-Committee consider that prior consideration should be given to the possibility of adapting and extending existing dock canteens and local cafes habitually used by workers, so that existing facilities may be utilised to the utmost, and the Report is concluded, with a Recommendation that "the canteen requirements at ports should be determined by local conditions and habits and consideration given to existing facilities before embarking upon the construction of new canteens."

A very important service is being rendered to the national effort by these and previous investigations and by the criticisms of the Select Committee. It is a matter of regret, therefore, to see that there has been friction with the Departments concerned, leading up to a request by one of the members of the Committee to be released from further service. It is to be hoped that the request will not be pressed.

A New Zealand Port's Affairs.

The Napier Harbour Board, New Zealand, appears to be experiencing some difficulty in popularising the new breakwater quay which, at no inconsiderable outlay, has been provided with a view to the development of the overseas trade of the port. Hitherto, deep-draughted ocean-going vessels have been accommodated at anchorages in the capacious harbour area, where a depth of 28-ft. is available throughout. Very shortly, when the present dredging programme is completed, this will be increased to 30-ft. There is, however, a new quay recently constructed on the inner side of the breakwater, which has been designed to afford a depth of 35-ft. alongside.

In spite of this advantage and the facilities available for handling cargo directly ashore, it would appear from a report of the proceedings at a recent meeting of the Harbour Board, that certain vessels have continued to moor at the anchorages, instead of coming alongside the quay and so saving the cost of lighterage. A member of the Board expressed the view that "producers of the district and the British Government were mulcted of £10,000 more than if these vessels had loaded at the breakwater." This excess expenditure was confirmed by the Secretary as applicable to the three ships last loaded, the exact figure being £10,125, of which £2,221 had been paid by the British Government and the balance by the producers of the district.

Such a revelation is distinctly disturbing, and we are not surprised that the Board decided to take immediate action by appointing a special committee to look into the matter. It is indeed somewhat surprising to find that neither the representatives of the home government nor the trading community of Hawke's Bay appear to have realised the loss which they were incurring by their adherence to an obsolete system of cargo handling by lighterage. Mr. Logan, the member of the Board above referred to, went so far as to allege that "there is some sinister move afoot which has a damaging effect on the harbour, the British Government and the producers of Hawke's Bay." We are not in a position, neither do we wish, to comment on a charge of this kind, but we feel that the Board is well advised to investigate the matter thoroughly. The special committee which was appointed on the direct recommendation of the Finance Committee, has wide instructions and should be able to clear up what must be candidly admitted to be an unsatisfactory situation. The harbour development policy of the Board does it great credit and it would be a tragic misfortune if its object were not achieved through lack of adequate publicity about the economic advantages of the new accommodation available.

Port Operation and Road Transport.

The connection between port operation and road transport is intimate and vital, especially at times like the present, when every available means must be utilised to clear the quayside of incoming goods and to handle outgoing consignments with expedition and alacrity. In the November issue, reference was made to a movement directed to this end, inaugurated on Merseyside,

which has developed into the organisation known as The Port of Liverpool Road Transport Control, Ltd. As the functions and scope of this body are of wider than merely local interest, there is included in this issue some account of its composition and activities. It has already served as a model for similar controls in other parts of the country.

A point of particular interest is the effect of an organisation of this kind in diminishing an evil only too rampant at ports, viz., pilferage, which, as our readers know only too well, entails enormous losses annually on traders and insurance companies. We are assured that in consignments aggregating a value of £70,000,000 carried by the Port of Liverpool Road Control during the last twelve months, mainly of foodstuffs, i.e., commodities not in general issue to the public, the genuine claims for loss by road transport do not exceed £1,000, a figure which reflects very favourably on the honesty of the drivers. This is attributed in no small measure to the close relationship between the drivers and the owners, who, in the majority of cases, represent small businesses, that is to say between five and twenty vehicles.

The Minister of War Transport on Unified Control.

At the opening luncheon of the Institute of Transport for the 1941-2 session, Lord Leathers, Minister of War Transport, made the following allusion to the subject of unified control in its relation to port and canal operation:—

"Co-ordination of all forms of transport proceeds. As far as concerns the transport in British ships and those on charter to us from our allies and friends, we have full control, and similar control of all movement by land is rapidly becoming a reality. The immediate effect of the merging of the Ministries of Shipping and Transport was to reduce the number of authorities to be consulted at the ports and to cut out a certain overlap which was inevitable under the formal dual administration. In addition, it enables the combined Ministry to plan and supervise every stage in the movement of goods from the port of loading to the works of the consumer. The merger is indeed a recognition of the close interdependence of every link in the transport chain.

"Perhaps the benefit of unified control was felt first in the ports. Combined with the appointment of region port directors and the decasualisation of dock labour, it has already resulted in the quicker turn-round of ships, but strenuous efforts by management and worker will be needed to maintain that improvement through the winter. We cannot afford to relax for one minute. More and better equipment is being installed as fast as it becomes available and more inland sorting stations and warehouses are being provided. We shall go on developing and improving our methods and equipment; we must keep the turn-round time down to the irreducible minimum.

"Our canals are also playing a useful and growing part, and in spite of the difficulty of finding new crews for canal boats, arrangements are being made to allocate to them suitable blocks of extra traffic. The six regional committees have been reconstituted and strengthened and their work is now co-ordinated by a Central Canal Committee under the chairmanship of Colonel Llewellyn. You will forgive me if I turn aside to say how profound a loss is the death of Frank Pick. I feel I must pay a tribute to the very high value of the work he rendered to my Department over many months. We are particularly indebted to him for his work on canal transport.

"Before I sit down let me add one word on post-war plans. While we must keep our eye on the ball to make certain that our war drive is the best we can produce, we do not forget the importance of preparing for post-war transport policy. Much of what is happening in home transport to-day, necessitating as it does a sensible working together of rail, road and water carriage, should prove useful in planning a sound system of national transport in the future."

Civic Planning in Port Areas.

A short time back we made some observations on the subject of replanning after the war, urging that in any scheme of replanning for municipalities associated with port undertakings, an effort should be made to secure some degree of uniformity, or at least congruity, of treatment for both town and port. This was not intended to imply that the conditions were similar, or that port planning could effectively be handled by civic draughtsmen, unacquainted with the complexities of port problems. When a town planner invades the domain of port affairs, he is apt to let aesthetic considerations outweigh the more practical exigencies of commerce and navigation.

An instance of this has shown itself recently in a replanning scheme for a north-eastern port, where designs submitted for public approval have included alterations to the waterside frontage materially affecting the operation of the port, the regimen of the channel and the safety of navigation. To say the least, such proposals should only emanate from those who are fully conversant with the intricate problems involved. In the present case, the designers do not seem to have taken the essential preliminary step of securing the approval of the riverside authorities concerned.

The Port of Hong Kong

Report on Future Control and Development

By the Late Sir DAVID J. OWEN.

THE following is a transcript of the Report on the Port of Hong Kong,* dated 24th February, 1941, by the late Sir David Owen addressed to Sir Geoffrey A. S. Northcote, K.C.M.G., the Governor of the Colony of Hong Kong:—

Your Excellency,

1. In accordance with your invitation to me to visit Hong Kong for the purpose of investigating the Port facilities, etc., there, and making recommendations for the future control and development of the Port, I beg to report that I arrived in the Colony on the 10th January, 1941.

2. I was accompanied by Mr. Duncan Kennedy, M.Inst.C.E., who was appointed by you to advise me on any engineering matters that might arise in the course of the Inquiry.

3. The exact terms of the whole question given me were:—

"To investigate the whole question of Harbour facilities, organisation and administration at Hong Kong, having regard to the existing system of pier leases which are due to expire in ten years' time; and, in the light of physical, economic and political conditions, to make recommendations for measures by which the Port could in future be developed and controlled to the best advantage of all persons and interests dependent on its services."

4. During the period of my stay in Hong Kong with Mr. Kennedy, I carefully inspected the whole of the Port and listened to representations from the various interests connected with its trade, apart from receiving a considerable amount of information from Government officials.

5. I think it desirable, in order that the conclusions to which I have arrived may be the better understood, that I should first of all set out, as briefly as possible, the nature of the problem as it presented itself to me.

6. **Historical Background.**—The historical background of the Port is not an extensive one. It appears that, in the third decade of the last century, the island now known as Hong Kong was a place of small consequence inhabited by a few fishermen, stonecutters and farmers, and it was a notorious hiding place for smugglers and pirates. In 1841 it was taken by British forces partly as a reprisal for the bad treatment of British merchants in Canton and partly to provide a base from which trading might be carried on with merchants in South China. The cession of the island to Great Britain was confirmed by the Treaty of Nanking in August, 1842.

7. The Convention of Peking in 1860 added the Kowloon Peninsula and Stonecutters Island to the Colony, while, under a further convention of 1898, the area known as the New Territories, including Mirs Bay and Deep Bay, was leased to Great Britain for a period of 99 years.

8. **Government in Relation to the Harbour.**—The Government of the Colony is administered by a Governor aided by an Executive Council and a Legislative Council, there being various departments dealing respectively with such matters as finance, the administration of justice, public health, public works, education, police and so on.

9. The Harbour is not run as a separate department, the engineering side of it being a sub-department or section of the department of Public Works. The control of navigation within the Port is under the Harbour Master whose department is a separate one, but his functions are wider than those usually performed by a Harbour Master, as he is also apparently Emigration Officer, Superintendent of Mercantile Marine, Registrar of Shipping, Principal Examiner of Masters and Mates, Director of Air Services, Marine Magistrate and a member of the Harbour Advisory Committee.

10. Work in the Harbour, such as the reclamation of land from the waterways, piers for Government use, and dredging, etc., have been executed by the Department of Public Works, but beyond the provision of mooring buoys, navigational lights for ships, and an amount of dredging, not much money has been spent by the Government on accommodation in the nature of piers, etc., for shipping and for goods imported and exported, that having been left to private enterprise, the Government merely leasing the necessary land.

11. **Harbour Advisory Board and Committee.**—In the year 1927, a suggestion that an Advisory Body, to be called the "Hong Kong Harbour Board," should be established, was approved by the Governor. The idea apparently originated with the Harbour Master who reported that all great Ports of the size of Hong Kong had such Boards of one sort or another and, as he had been in Colombo, he seemed to think that the system there was the ideal one. It was not until 1929 that the "Hong Kong Harbour Board" was actually formed and it consisted of the Harbour Master, as Chairman, with seven Government officials as well as four members recommended by the General Chamber of Commerce and two nominated by the Chinese Chamber of Commerce, together with representatives of the Royal Navy and the Mercantile Marine, respectively.

12. The duties of this Board were to advise the Government in any matter concerning the Harbour as to which the advice of the Board might be sought by the Governor.

13. It is interesting to note that when the General Chamber of Commerce was consulted before the appointment of the Board, they stated at first sight it appeared that the appointment of such a body without executive powers would lead to slight, if any, improvement upon the then existing organisation as regards the Harbour. Later the Chamber expressed themselves as apprehensive that the formation of such a Harbour Board would eventually lead to increased expenses being placed on shipping. They also stated they were generally in favour of the establishment of a Harbour Board provided that the ultimate aim of the Government was to form a Body which would eventually be given limited authority with moderately wide terms of reference in respect of general questions of policy in Harbour development.

14. Later the idea grew that a smaller and more flexible Body would be desirable, and in 1931 the Board was dissolved and a small "Harbour Advisory Committee" was substituted, consisting of four Government officials, three unofficial members who were British subjects and one of whom was of Chinese nationality, and a Naval officer. The Colonial Secretary acted as Chairman of this Committee. From time to time various matters were referred to the first Advisory Board and subsequently to the Advisory Committee.

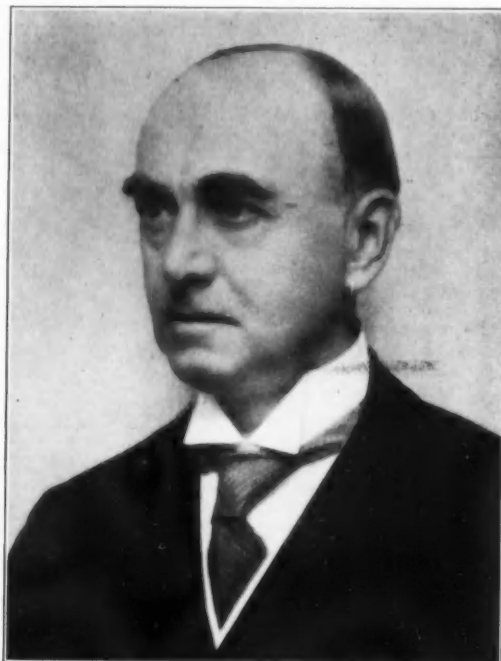
15. It seems that the Harbour Advisory Committee is still in existence in name, but no meeting has been held for about two years. It cannot therefore be said to have a marked influence on the policy of the Port. It will, however, refer to it later in this Report.

16. **Extent of the Port's Trade.**—The extent of the trade of the Port may be judged by the amount of shipping entering and leaving the Harbour. The following table gives the shipping tonnage at five-yearly intervals from the year 1919:—

Year	Ocean-going Tonnage	Other than Ocean-going	Total
1919	14,467,847	21,147,322	35,615,169
1924	27,874,890	28,856,247	56,731,077
1929	28,285,741	18,900,440	47,186,181
1934	28,905,526	18,008,496	41,914,022
1939	22,148,228	8,749,720	30,897,948

The year 1924 shown above happens to be the peak year of the Port's tonnage.

17. There is no record kept of the weight of all articles imported and exported, but the following table gives the total values for the same years, as far as possible:—



The Late Sir DAVID J. OWEN.

*Reproduced by permission of the Colonial Office.

Port of Hong Kong—continued

Year	Imports \$	Exports \$	Total \$
1919		(statistics not available)	
1924	607,625,078	536,208,792	1,143,833,870
1929		(statistics not available)	
1934	415,918,522	325,104,653	741,023,175
1939	594,199,224	533,385,203	1,127,584,427

Note—The value of the dollar fluctuated considerably in this period.

18. There has been a steady decline in the volume of the traffic of the Port since the year 1924. The cause for the recent decline is of course to be found in the interference with trade resulting from the war between China and Japan as well as the European war.

19. A decline had, however, begun before those causes operated, and there was such cause for anxiety that in 1934 the then Governor appointed a Commission "to enquire into the causes and effects of the present trade depression in Hong Kong and make recommendations for the amelioration of the existing position and for the improvement of the trade of the Colony."

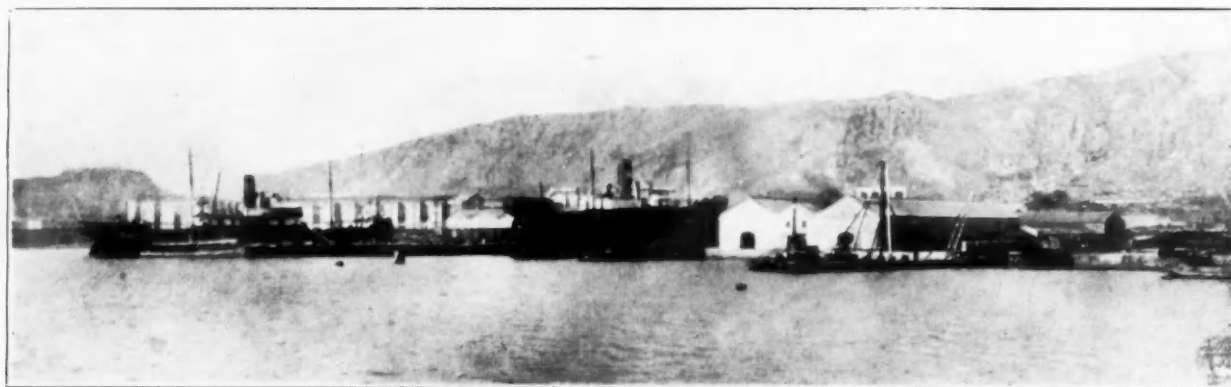
20. This Commission reported in 1935. It was not able to make any important recommendations for bettering the position, but it touched the root of the matter when it said "The world-wide depression, a reaction from the post-war boom, was bound to touch China and therefore Hong Kong..... Hong Kong handles about one quarter of China's coastwise and foreign trade. She suffers, therefore, not only from the effect of the world depression on China, in which respect there is a decreased demand for China's products and labour and therefore a decreased purchasing power for imports, but also from other

convenient access to the interior as well as safe anchorage and efficient equipment and facilities. Goods in transit to and from China and other Asiatic countries must in the main be conveyed in deep-draughted ships and discharged at some point into smaller coasting vessels or into warehouses ashore, or vice versa as the case may be. Hong Kong serves this purpose, and is able to secure the business because of the position of its excellent Harbour coupled with the cheapness of its facilities.

Existing Facilities of the Port

26. **Piers.**—The waterway of about 17 square miles in area between the island of Hong Kong and the mainland forms a magnificent natural harbour and has a depth varying from 24 to 78-ft., there being a rise at spring tides normally of only about 8-ft. This small range of tide renders it unnecessary for enclosed docks with locks to be provided, and therefore the accommodation for the berthing of vessels has taken the usual form in such circumstances, viz., fixed piers projecting from the shore into the waterway.

27. They are of varying design and utility and have been constructed around the Harbour to serve particular trades. The majority of them are privately owned and stand on sites that have been leased by the Government at an annual rent. They are also some, called temporary piers, that the held on annual licence from the Government. The history of the leasing of the permanent piers is important, for it is the matter of these leases that has largely given rise to the present problem, as will be gathered from the mention of them in the terms of reference.



Shipyard of W. S. Bailey & Co., Ltd.

factors." In other words, the then depression in Hong Kong's trade was due mostly, if not entirely, to causes outside its own control.

21. **Nature of the Port's Trade.**—Some Ports owe their origin to raw materials found in the vicinity for which there is an export demand, or to factories in the neighbourhood whose products must be exported. Other Ports are centres of big populations which have largely to be supplied with food, etc., by sea. Others perform a useful function in connection with entrepôt or transshipment trade.

22. In the case of Hong Kong its production of raw materials is negligible, while it produces only a small fraction of the foodstuffs it consumes. There are industries established in Hong Kong such as shipbuilding and ship repairing, sugar refining, brewing, knitting and weaving, and the manufacture of rope, ginger, aerated waters, bricks, cement and tiles, etc.

23. The principal commodities imported into Hong Kong are foodstuffs, piece-goods and textiles, oils and fats, metals, Chinese medicines, fuels, live animals, vehicles and machinery and engines; while the chief exports consist of foodstuffs and provisions, treasure, oils, fats, metals, wearing apparel, Chinese medicines, minerals and ores and vehicles.

24. The normal trade of Hong Kong falls into the following broad categories:—

- Imports for consumption in Hong Kong and raw materials for certain industries, and exports of Hong Kong origin.
- Chinese external trade passing through Hong Kong, i.e., Chinese goods re-exported to non-Chinese countries and non-Chinese goods re-exported to China.
- Chinese coastal trade, i.e., goods imported from one part of China and re-exported to another.
- Non-Chinese entrepôt trade, i.e., goods imported from a non-Chinese country and re-exported to another non-Chinese country.

25. It is estimated that only about one-third of the imports into Hong Kong consists of goods intended for retention in the Colony and that less than one-tenth of the exports are of goods originating there. The bulk of the trade of the Port is transshipment or entrepôt. The very important function which the Port performs in this respect is due to the fact that between Shanghai and Indo-China there is no other deep-sea harbour having

28. Prior to 1899 such piers as were in existence were let on varying conditions but in that year it was decided to grant pier leases for a term of 50 years ending on the 31st of December, 1949. Leases granted after 1899 were made to expire on the same date. The leases gave the right to the lessees of erecting and maintaining piers in, upon, over, across and above the Crown foreshore and Crown land covered with water, subject to the payment of a rent and to the observance by the lessees of all the provisions of the Piers Ordinance, 1899, and of any Ordinance at any time thereafter amending or substituted for the same and also the observance of any regulations then made or thereafter to be made by the Governor in Council, under Section 15 of the said Piers Ordinance, 1899.

29. The rent was based on the extent of the encroachment made by the piers, and a schedule of annual rents was drawn up, the figures varying from \$120 for an encroachment of 500 square feet or less to \$1,200 for an encroachment of over 10,000 square feet. This scale applied to sites in the City of Victoria; in any other place the scale was one half of those amounts. The term "Permanent Pier" is applied to piers erected under such leases.

30. There is no condition in the leases giving the lessees the right or any expectation of a renewal of them, and the piers at the termination of the leases thus become the property of the Government.

31. There are two Reports in existence touching on the matter. The first is dated 29th August, 1922, and is signed by Mr. E. R. Hallifax, then Secretary for Chinese Affairs, and Mr. C. W. Beckwith, then Harbour Master. In it the opinion was expressed that it was desirable to aim at the ownership by the Government of all piers, it being presumed that Government control could be made a "sound financial proposition."

32. The second Report is signed by Mr. John Duncan, the then Harbour Engineer, and Mr. L. C. P. Rees, then Principal Land Surveyor, and is dated 1st September, 1922. The authors of the Report had been asked to report on certain pier sites and were instructed, when dealing with the matter, to bear in mind the opinion expressed by the Colonial Secretary and the Harbour Master at a meeting of the Town Planning Committee, to the following effect:—

- In future the Government should not alienate any more of the Harbour frontage for the erection of private piers for the purpose of dealing with ocean-borne merchandise.

Port of Hong Kong—continued

- (b) In future the Government should erect, maintain and administer all piers designed to accommodate ocean-going steamers.
- (c) The Government should pursue a policy of acquiring and thereafter administering existing piers, with however certain exceptions such as those of the Hong Kong and Kowloon Wharf and Godown Company, and Messrs. Alfred Holt and Company.
- (d) Wherever opportunity arises, the Government should acquire existing ferry pier sites, and in future all new ferry piers should be erected and maintained by the Government.



Premises of Hong Kong and Whampoa Dock Company.

33. The Report made certain recommendations in accordance with this policy, it being emphasised that these recommendations were made on the clear understanding "that the Government would exercise its rights in 1949 and take possession of all existing pier sites," the leasing of which might hinder such policy of Harbour frontage development as might be decided upon, and it was suggested that the Government should notify all lessees of such pier and pier sites that their leases would not be renewed after 1949.

34. The Report gave some arguments, in support of the recommendations, apparent to the effect that private enterprise was in the least favourable position to meet the needs of a growing Port while the Government with its own system of administration would be in the best position with a free hand to develop the frontage on systematic lines.

35. Whatever may be said on the merits or demerits of these arguments, a definite line of policy was suggested but I cannot find that the pier lessees were notified. It was naturally a difficult question with which the Government was faced. It is a fact, however, that the Government did in one case at least, refuse an extension of lease pending a general investigation into the question of policy in relation to the Harbour, and many of the leaseholders are under the impression that the Government does not intend to renew the leases.

36. It may be mentioned that the average total annual rentals paid to the Government during the past three years for the permanent and temporary piers amounts to \$43,600.

37. **Warehouses or Godowns.**—Having regard to the nature of the trade of Hong Kong there is need for a good deal of warehousing or godown accommodation and this also has been provided by private enterprise. The godowns are all privately owned, some of them, particularly those of the Hong Kong and Kowloon Wharf and Godown Company, Limited, and Messrs. Alfred Holt and Company (Messrs. Butterfield and Swire, Agents), being most up-to-date and excellent for their purpose.

38. It is estimated that there is a total storage capacity in the Port for about 1,000,000 tons of goods. The three largest Godown Companies have a storage capacity of roughly 100,000 on the Hong Kong side and 400,000 on the Kowloon side, the balance being divided up between numerous native-owned premises of smaller capacity in both places.

39. The godowns are constructed on land leased from the Government mostly for periods of 75 years with the option of renewal for another 75 years, while the piers in front of the godowns are under the leases already referred to, which expire at the end of 1949. As the godowns are not of much use without the piers, the difficulty of the pier problem will be appreciated.

40. The large godown companies act as public warehouse keepers and accommodate at their piers any vessels that elect to go there. In the case of Messrs. Alfred Holt and Company, their piers and godowns are primarily for the use of their own vessels and those of their associated companies. There are also several other piers and godowns which have been provided by the lessees for their own vessels and the good therefrom.

41. **Mooring Buoys.**—There are 48 mooring buoys in the Harbour—17 for Class "A" ships of from 450 to 600-ft. in length, 27 for Class "B" ships of from 300 to 450-ft. in length and 4 for Class "C" ships of less than 300-ft. in length. These buoys are owned by the Government who charge for their use \$16, \$12 and \$8 per day respectively. Certain firms own buoys for their own use and these, 58 in number, are held, by permission, at a charge of \$5 per month. Apart from these, there are 30 buoys belonging to the Admiralty and 5 owned by the Royal Air Force.

42. **Lights and Buoys.**—For the guidance of vessels making for and leaving the Port, the Government maintains lighthouses at Waglan and Gap Rock, 15 minor harbour lights, of which two have skeleton staffs, and three lighted navigational buoys. There are also two signal stations, one at Green Island, and the other at Blackhead. The light dues imposed by the Government are two and four-tenths cents per ton on all ocean-going vessels and nine-tenths of a cent per ton on all river steamers which enter the waters of the Colony.

43. **Petroleum Oil and Spirit Accommodation.**—Apart from an Admiralty oil depot in Canton Road, Kowloon, there are three oil concerns owning installations, two of which—those of the Asiatic Petroleum Company (South China), Limited, and the Socony-Vacuum Oil Company—have sites within the Harbour limits. The third, belonging to the Texas Company (China), Limited, is located at Tsun Wan in New Territories. The two first-named have piers on the usual form of lease expiring in 1949.

44. Each of these Companies in addition to the piers own pipe lines, tanks and godowns and they have altogether storage for about 53,500 tons of paraffin oil, 39,900 tons of fuel oil, 25,000 tons of Diesel oil and 90,000 tons of miscellaneous oil. This represents a total storage capacity of over 208,000 tons of all kinds of oil.

45. **Dry Docks and Shipbuilding.**—The shipbuilding and ship-repairing industry is the largest of what may be termed the manufacturing industries in the Colony. There are three excellent main shipbuilding and ship-repairing establishments in the Port,—those of

The Hong Kong and Whampoa Dock Company, Limited; Taikoo Dockyard and Engineering Company Limited; and Messrs. W. S. Bailey and Company, Limited.

46. Between them they have seven dry docks varying up to 787-ft. in length together with ample slipway, piers, quays, cranes and equipment necessary for the building of vessels of upwards of 10,000 tons and for the carrying out of repairs to all vessels using the Port.

47. In addition, there are four native-owned and managed shipyards in Kowloon capable of repairing vessels of up to about 1,100 tons displacement, and one in Hong Kong capable of taking vessels up to 60 tons displacement.

48. **Pilotage.**—Pilotage is not compulsory at the Port of Hong Kong but there are pilots who are licensed by the Harbour Master. In practice, foreign-going vessels employ a pilot, but locally-registered vessels which are in and out of the Port many times in the year, do not.

49. The pilots use their own craft, usually sampans, for boarding ships but they may use a launch belonging



Steamers berthed alongside the Hong Kong and Kowloon Wharf and Godown Co.'s Piers at Kowloon Point.

Port of Hong Kong—continued

to the particular steamship company whose vessels they are to meet.

50. **Rail Communication.**—The Port is connected by railway on the Kowloon side where the Kowloon-Canton Railway (British section), has its terminal. This section is Government-owned and runs from Kowloon for a distance of 22 miles in Lowu on the border of the New Territories. In 1911 a connection was made at Lowu with the Chinese Government line running to Canton (Canton-Kowloon Railway—Chinese section), thus affecting a through connection to the latter place. In 1937 a connection was made close to Canton with the Canton-Hankow Railway, so giving a through connection to Hankow.

51. In 1938 about 500,000 tons of goods, mostly for military use, were sent by rail to various points on the line to Hankow. Since then however, during the course of the hostilities between China and Japan the Chinese lines of railway have been much damaged at places, and the Kowloon-Canton Railway is now only operating to Lowu.

52. From evidence given to me, it would appear that if and when matters settle down in China, there will undoubtedly be a demand for the conveyance of more and more goods by rail. If this should prove to be the case the railway undertaking would, it is stated, require more facilities than they now have in the way of pier and godown accommodation. When Messrs. Coode, Fitzmaurice, Wilson and Mitchell reported in 1922 on the development of the Port, they provided for the construction of new piers with railway connections.

53. Although it is not expected that the necessity for more facilities for the railway will arise for some years, I think it well to mention it now, as it is a factor that will have to be borne in planning for the future development of the Port. It is expected that the railway, connected again as it should be with the Chinese railways, will be able to tap sources of trade, yet untouched, in rich territories in China and so tend to the expansion of the trade of the Port of Hong Kong. In the meantime the railway undertaking has ample Port facilities for the conduct of its business.

54. **Roads.**—There are some 371 miles of good roads in the Colony, 173 being on the island of Hong Kong, 106 in Kowloon and 92 in the New Territories. From a Port point of view there does not seem to be much to complain of as regards road facilities for the conveyance of such goods as have to go over road, to and from the water front, except that there is congestion, owing to its narrowness, of the public road which runs along the waterside in Victoria from the Naval Yard to Wing Lok Street. This matter is dealt with later in this Report. With regard to goods traffic with China, carried by road, it will no doubt be necessary, in future, to widen and improve the present road to the frontier, to cope with any increase of such traffic that may take place when normal conditions are restored.

55. **Ferries.**—Owing to the geographical position of Hong Kong the need for a ferry service to convey passengers and vehicles between the Island and the mainland at Kowloon naturally arose, and such a service was established many years ago.

At the present time there are a number of ferry services, the most important being:—

- (a) The Star Ferry for passengers between Kowloon Point and a site near the General Post Office in Hong Kong.
- (b) The Hong Kong and Yaumati Ferry for passengers between Hong Kong and Jordan Road, Shan Tung Street, Pei Ho Street, Gillies Avenue and Kai Tak Road, all in Kowloon; also to Sai Wan Ho near the eastern end of the Harbour; and for vehicles between Hong Kong (Jubilee Street) and Kowloon (Jordan Road).
- (c) The New Territories Ferries run by the Hong Kong and Yaumati Ferry Company, from a position near Wilmer Street, Hong Kong, to Cheung Chau Island, Tsun Wan on the mainland, Ma Wan Island, Castle Peak Bay on the mainland, Ping Chau Island and Silver Mine Bay, Tung Chung and Tai O which are situated on the Island of Lantau, and also to Aberdeen a small port on the southern side of the island of Hong Kong, all of which are outside the Harbour limits.

56. The piers used by the Hong Kong and Yaumati Ferry Company were constructed and are maintained by the Government, the Company paying the Government an annual sum for the privilege of running the ferry and for the use of the piers.

57. The Star Ferry Company, however, built their own pier on the Hong Kong side and rent the pier on the Kowloon side from the Hong Kong Wharf and Godown Company, who were the originators of the ferry. These two piers are held under the ordinary permanent pier form of lease which lapses in 1949. The amount paid by the Star Ferry Company to the Government is naturally less than that paid by the other ferry company, seeing that the Star Ferry Company maintain their own piers, but the question of increasing it is under discussion with the Government.

Reclamations

58. A good deal of work has been done in the way of reclaiming land from the waters of the Harbour. The primary object

was not to improve the Harbour from a shipping point of view, although some of the work may have been of benefit in that way, but it was for the purpose of making land on which to construct houses, offices and premises necessary for the growing population. Owing to the geographical features of the Colony, consisting, as it does, largely of hilly country, it became more difficult as time went on, to find level ground on which to build, hence the idea of reclamation.

59. As a matter of fact, reclamation was started in the early days of the Colony and has been continued at short intervals ever since, the principal ones being The Praya Reclamation 1890-1902 and The Praya East Reclamation 1921-1929. The reclamations have been financed in various ways; the larger ones were carried out under schemes whereby the holders of the old Harbour frontage lots of land participated in proportion to the areas they held, and subscribed to the cost of the work in like proportion. The Government, in each case, subscribed and participated in proportion to the areas it held. Many smaller reclamations have been carried out by private persons and companies, and in Kowloon the Government has reclaimed, at a cost paid out of revenue, large areas of land in Taikoktsui, Shamshui, Ma Tau Kok and Kowloon City. The railway reclamation in Hung Hom Bay was financed by money raised by the Government on loan which has now been redeemed.

60. I shall have to deal later with the question of future reclamation, as it is closely bound up with the development of the Harbour.

(To be continued)

Notable Port Personalities

XVII.—Mr. Roland H. Jones, O.B.E.

Mr. Roland Henry Jones, General Manager of the Port of Bristol Authority, was born in Bristol in 1879. He entered the service of the Authority in November, 1893, and after being trained through the various departments, was appointed Committee Clerk in 1899, Assistant Manager in November, 1918, Commercial Manager in October, 1927, and General Manager in April, 1932. For special services rendered to the Ministry of Shipping



Mr. ROLAND H. JONES, O.B.E.

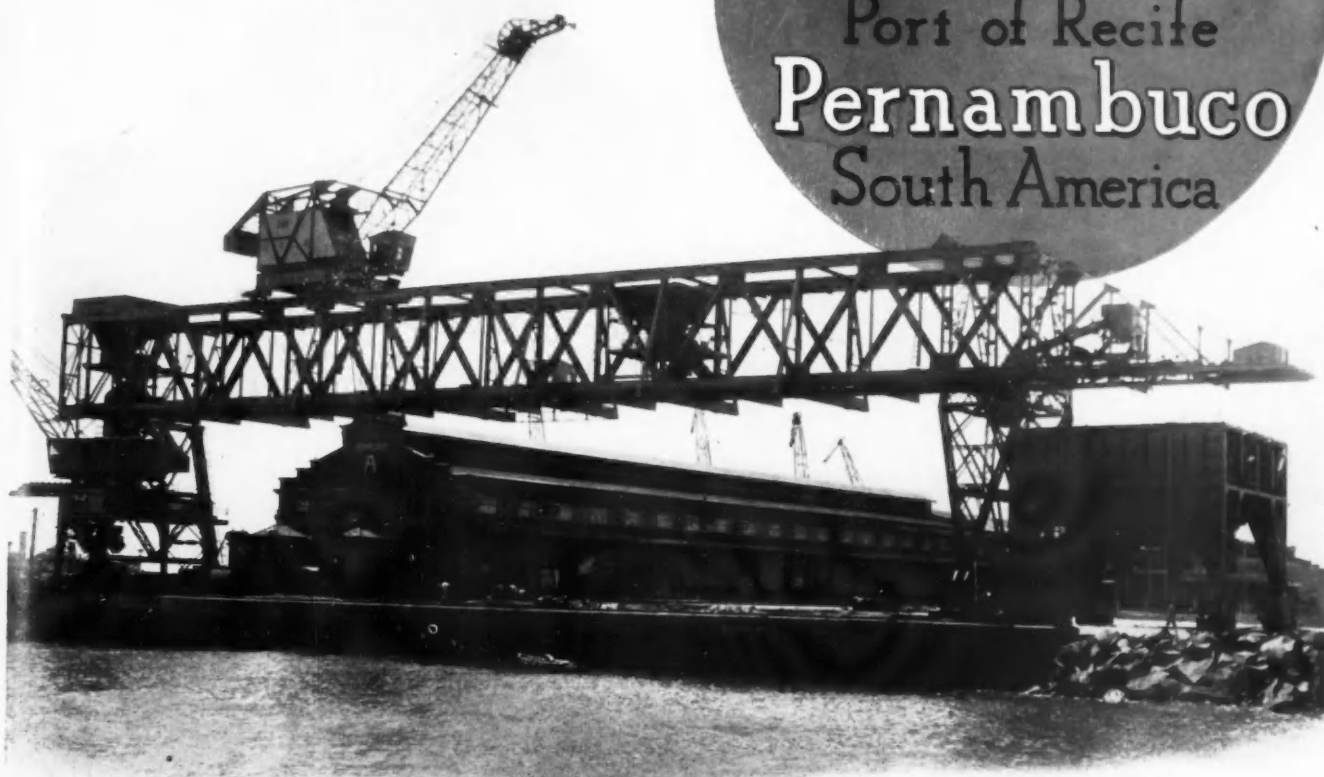
at the time of the last war he was awarded the distinction of O.B.E. in 1920. Recently, as announced in the November issue of this Journal, he has been appointed a Director of the National Dock Labour Corporation, Ltd.

For a number of years (1931 to date), Mr. Jones has contributed valuable assistance to port affairs as a member of the Executive Committee of the Dock and Harbour Authorities Association and as a member of the Council of the Bristol Chamber of Commerce. He has also been Chairman of the Port of Bristol Emergency Committee since its inception and a member of the Executive Committee of the National Joint Docks Labour Committee.

Mr. Jones is a Member of the Institute of Transport and a Fellow of the Royal Society of Arts.

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CRANE SLEWING - - - - -	1½ REVOLUTIONS PER MINUTE
CRANE TRAVELLING - - - -	69 FEET (21 Metres) PER MINUTE
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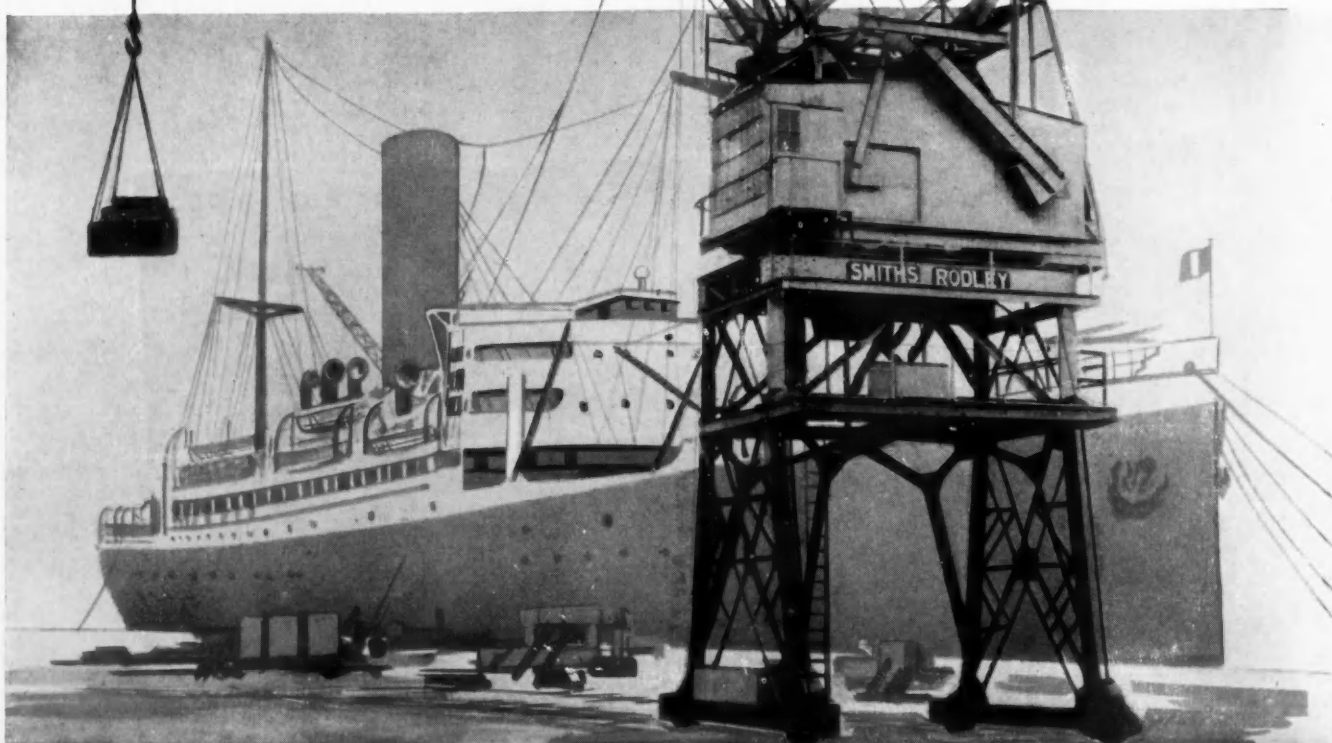
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Notes of the Month

Traffic at Canadian Port.

A return of the traffic at the port of Hamilton, Ontario, shows that a total of 2,942,859 tons of cargo was handled during the year 1940.

Oakland Board of Port Commissioners.

Messrs. James J. McElroy and Eugene W. Roland have been re-elected president and first vice-president, respectively, of the Board of Port Commissioners, Oakland, California, U.S.A.

Reconstruction of Port of Dunkirk.

A credit of about £1,100,000 at pre-war rates is stated to have been approved by the Vichy Government for dock reconstruction work at Dunkirk.

Tyne Improvement Commission.

At the annual meeting of the Tyne Improvement Commission, Sir Arthur M. Sutherland was re-elected chairman for the ensuing year and Colonel Sir Frank Simpson was re-elected vice-chairman.

Industrial Amalgamation of Scottish Ports.

Steps are being taken to bring about early in the New Year an amalgamation of the ports of Leith, Grangemouth, Dundee and Bo'ness for industrial management under the Essential Work Order, 1941.

Successful Operation of New York Foreign Trade Zone.

The Mayor of New York has announced a large increase in trade at the Foreign Trade Zone, or Free port, or Staten Island, New York. A report issued by the Commissioners for Docks shows a gain of 156 per cent. during 1940 over the trading figures for 1939.

New Naval Base in Nova Scotia.

It is announced in the Canadian press that another naval base is to be established at Shelburne, in the South of the province of Nova Scotia. Tenders for the work have been invited by the Federal Government. The harbour at Shelburne is said to be one of the best in the maritime provinces, ranking with Halifax in importance.

Harbour Improvements in the United States.

Important dredging operations, involving the removal of about 3 million cubic yards of material in each case, are about to be undertaken at New York harbour in the vicinity of Liberty Island Anchorage and in the Sabine Pass Jetty channel at the port of Galveston, Texas. Both programmes are to be carried out by contract under the direction of the United States Army Corps of Engineers.

Shipping Traffic at Oslo.

According to a report recently issued by the Oslo Chamber of Commerce, there was a considerable fall during 1940 in both foreign-going and inland shipping traffic. In the former category, only 948 vessels of 1,514,232 gross tonnage arrived from abroad during that year, as compared with 3,132 vessels of 5,919,429 tons in 1939. In the inland trade, the number of vessels engaged dropped from 28,944 of 4,022,931 gross tons in 1939 to 19,036 vessels of 2,459,554 tons.

New Entrance Channel to American Port.

The entrance channel to Grays Harbour, Wash., U.S.A., has recently undergone a change, due solely to natural causes. The old channel has been gradually silted up and a new entrance through the bar has been formed slightly to the southward. In the opinion of the U.S. Corps of Engineers, this channel appears to be stable and little difficulty is anticipated in its maintenance for the use of navigation. Dredging operations have, accordingly, been undertaken to provide a ruling depth of 30-ft. over a minimum width of 1,000-ft. Marking buoys and lights have been provided by the Coast Guard Service.

Hydrographic Survey Vessel for Sweden.

A new vessel for the Swedish Hydrographic Service has recently been launched at the Finnboda Varv, Stockholm. The vessel which is named *Gustaf af Klint* has a displacement of 650 tons and is the largest in the departmental fleet.

The need has long been felt for a vessel for making soundings in the deeper water a considerable distance from the coast, information regarding such depths being of great importance in foggy weather. It is stated that many strandings on the Swedish coast could have been avoided if more reliable information about depths some distance off-shore had been available. The new vessel will therefore be a valuable addition to the Swedish hydrographic survey equipment. The propelling machinery of the vessel consists of an Atlas Diesel Polar engine of 560 i.h.p. The vessel will carry a crew of 60 men.

Greenock Harbour Appointment.

Mr. D. Smith has been appointed General Manager and Engineer to the Greenock Harbour Trust.

Upper Mersey Navigation Commission.

Mr. Tom Stone has been elected to represent the Mersey Docks and Harbour Board on the Upper Mersey Navigation Commission.

Dredging of United States Intracoastal Waterway.

A considerable programme of dredging, involving the removal of several million cubic yards of material, is in hand in the Louisiana-Texas Intracoastal Waterways, under the direction of the United States Army Corps of Engineers.

New Floating Dock at Baltimore.

A new floating dock, with a lifting capacity of 18,000 tons, is contemplated by the Maryland Dry Dock Company for their yard at Baltimore, Maryland, in connection with the Defence Programme of the United States Government.

New Harbour of Loanda.

The contract for the construction of a new harbour at Loanda, in the Portuguese West African Colony of Angola, announced in a previous issue, has now been signed. The cost of the work is estimated at about half-a-million sterling and it will take 3½ years to complete.

Extension of Shipping Slipways at Melbourne.

It is announced in the Australian Press that the Government of Victoria have decided to assist the Melbourne Harbour Trust in raising a loan of £100,000 for the extension of slipways at the port, to enable vessels of large tonnage to be built. The intention is to build ships up to 10,000 tons deadweight.

Warehouse Accommodation at Budapest Free Port.

Owing to increasing demand for storage space, due to active transshipment traffic in the Csepel Free Port near Budapest, it has been decided to build two new warehouses, having a capacity of 350 to 400 wagon loads of goods. It is hoped to have the new accommodation available at the beginning of 1942.

Proposed Overhead Ropeway at Genoa.

For the purpose of linking up the port of Genoa with the network of inland waterways in upper Italy, which is nearing completion, a project is being studied for an aerial ropeway from Genoa to the Borbera Dam at a distance of 30 kilometres, which could be utilised as a transshipment centre for goods in transit from Genoa to upper Italy and Switzerland.

Proposed New Canadian Canal.

In conjunction with the St. Lawrence Seaway project, a movement is on foot for the construction of a canal across the Isthmus of Chignecto, linking New Brunswick with Nova Scotia. It is urged that if the war extended to the American side of the Atlantic, sea traffic could, by means of the canal, pass from the Gulf of St. Lawrence into the Bay of Fundy and so along the United States coast behind a protective minefield.

Suggested New Dry Dock for Melbourne.

In the Australian House of Representatives, a question was raised by Mr. Holloway, Labour Member for Victoria, as to whether financial assistance could be made available for providing additional dry docking facilities at Melbourne. The ministerial reply was that no application for assistance had been received from the Victorian Government, but if such a request were made, it would be given full consideration.

Reopening of Docks at Irish Port.

It is announced in the Cork press, that negotiations for the reopening of the Rushbrook Docks at Cobh (formerly Queenstown) have been successfully concluded in Dublin. A board of directors has been formed under the chairmanship of Mr. S. Fitzgerald, chairman of Cobh Urban District Council and of the Cork Harbour Commissioners. A majority of the shares of the company will be in the hands of the Éire Government. Some preliminary work will be necessary before the docks, which have been unused for a number of years, can be brought into commission.

Maritime Traffic at Beira.

The Report for 1940 of the Companhia de Moçambique, the port of Beira authority, shows a slight falling-off in shipping traffic compared with the previous year. Entrances comprised 597 ocean-going and coasting vessels (84 fewer than 1939) carrying 258,294 tons of cargo (68,159 tons below the figure for the preceding year) and 2,435 passengers (3,640 fewer). Sailings totalled 601 vessels (77 fewer than in 1939) carrying an aggregate cargo of 754,828 tons (269,667 tons more than in the preceding year). The number of outgoing passengers was 1,798 (3,439 fewer).

New Quay at Willington-on-Tyne

(Contributed.)

A NEW industry, the manufacture of plywood, was established a few years ago on the Tyne, one of the shipyards being converted into up-to-date works premises necessitating a new quay frontage. This has a length of about 650 feet and a dredged depth alongside of 27 feet below high water. The quay has been constructed by the Tyne Improvement Commission to the design of their Engineer-in-Chief, Mr. R. F. Hindmarsh, M.Inst.C.E., for the use of Messrs. Tyne Plywood Works, Ltd.



Pitching of Pile and Hammer.

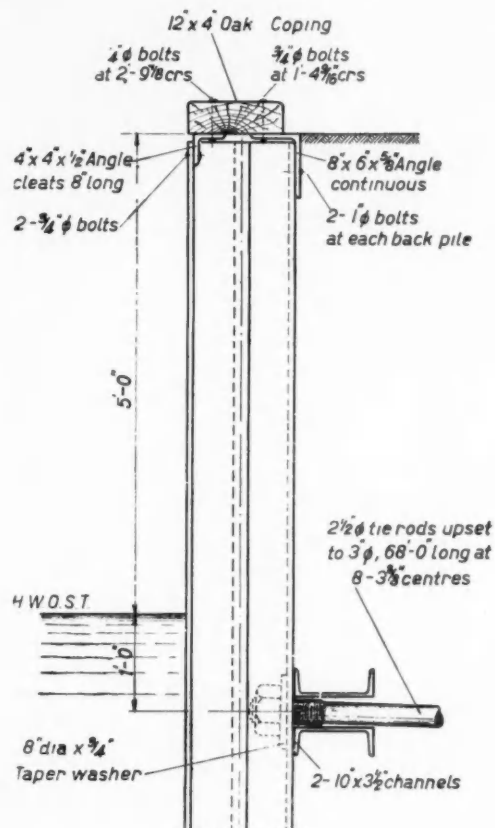
The best design combining both speed and economy in construction was a quay of steel sheet piling and Larssen Section No. 5 was selected as being the only section with sufficient strength modulus available at the time. The design follows the simple and straightforward form which is more or less standard for the construction of steel pile retaining walls.

The sheet piling, which was supplied by the British Steel Piling Company, Ltd., is anchored back at every sixth pile to groups of piles of Larssen Section No. 3 by means of twin tie-rods to each group. At the top of the sheet piled wall there is an oak coping fixed to steel angles bolted to the piling.

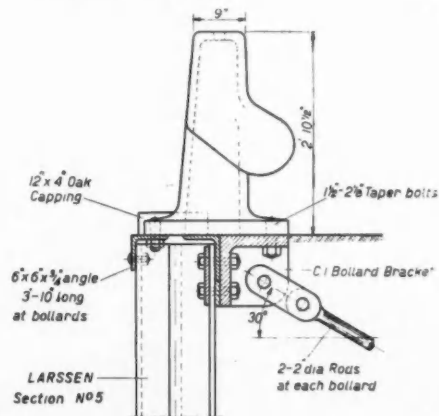
Mooring bollards are fitted at frequent intervals and are bolted to castings which distribute the pull on the bollards over an area of piling. Two additional tie-rods at 45 degs. to the face of the quay are fixed from each bollard to independent anchor blocks to prevent overloading the main tie-rods, particularly when vessels are warping along the berth.



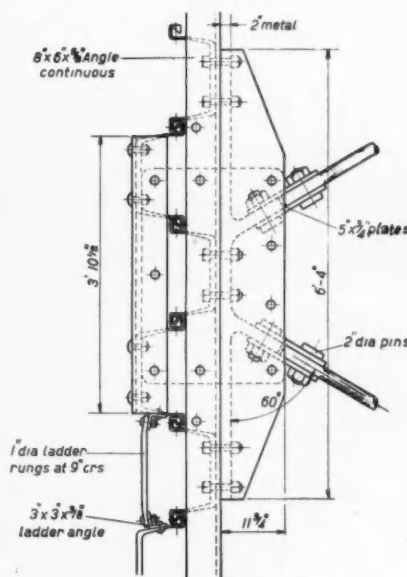
Old Timber Wharf: Commencement of Operations.



Detail of Top Piling.



SECTION



Detail of Bollard.

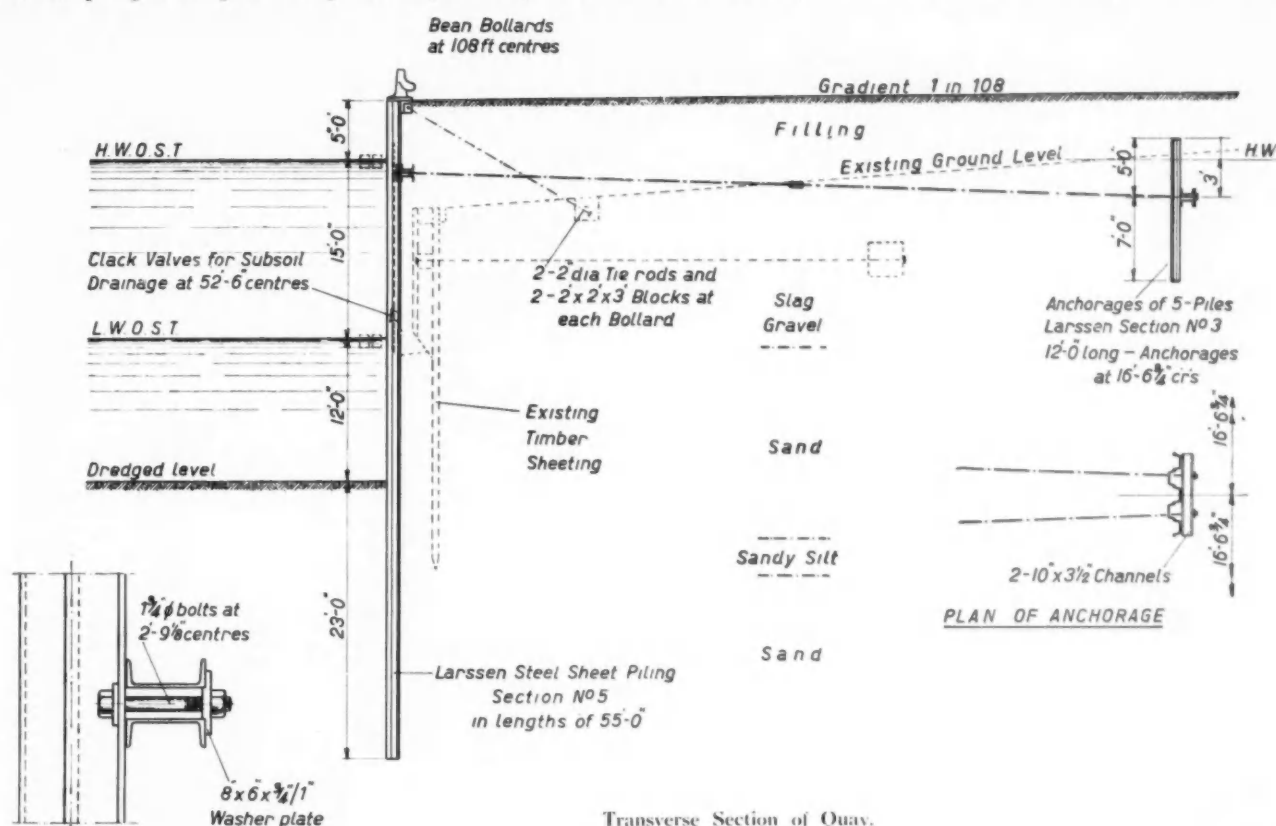
New Quay at Willington-on-Tyne—continued

To limit the accumulation of any head of water behind the sheet-piling, the subsoil water is drained off above water level, the outlet pipes being fitted with flap valves to prevent the ingress of tidal water.

An unusual feature of this quay is the absence of timber fenders fixed to the piling, their place being taken by floating timber

booms consisting of two whole timber logs with rubber washers between them, rising and falling with the tide on wire rope guides fixed in the troughs of the piling. Ladders are formed by fixing iron rungs in the troughs of the piles at suitable intervals.

The driving of the piles was carried out with a No. 7 McKiernan-Terry hammer suspended from the jib of a travelling



Transverse Section of Quay.



View of Completed Quay.

derrick crane, this part of the work occupying about five months. The construction of the quay as a whole took just over seven months.

The work in question is a good example of the merits of steel sheet piling in the construction of quay walls. No other form of quay could have been completed in the time available or at anything like the cost. Until recently there was a certain amount of prejudice against steel piling, some engineers being doubtful about its effective life. Investigations of exposed steel structures in use for 40 years or more, combined with the 15-year tests on the corrosion of steel carried out by the Sea Action Committee of the Institution of Civil Engineers, have shown that in ordinary circumstances the effective life of a steel structure can be relied upon to outlast its usefulness by a considerable margin. The heavier sections of steel piling generally employed in dock and harbour construction, sometimes assisted by the addition of a small percentage of copper, ensure a particularly large factor of safety against premature deterioration.

War Damage at Ports: Negotiations with Government.

In his address to the Tyne Improvement Commission at their annual meeting, Sir Arthur Sutherland, the chairman, revealed that negotiations were proceeding between the Dock and Harbour Authorities' Association and the Treasury as to the basis on which British dock and harbour authorities should contribute towards the cost of repairs and replacements due to war damage at ports.

The Government, he said, had suggested a certain figure as a contribution by port authorities. Against this, the Association contended that having regard to the fact that ports were primary

targets in the eyes of the enemy, they should receive special treatment and that the Government should meet the whole cost of such damage as had been incurred. "So far," added Sir Arthur, "the Government seemed inclined to consider a lower percentage contribution from dock authorities than had originally been discussed."

It will be felt in port circles that there is considerable justification for the contention of the Dock and Harbour Authorities' Association. The importance of the matter can hardly be over-rated and the result of the negotiations will be awaited with keen interest.

Barrages across the River Murray in South Australia

A Notable Impounding Undertaking

IN connection with the installation of important irrigation works in South Australia, certain barrages were authorised to be constructed across the mouth of the Murray River in order to make the river permanently navigable to Echuca in the State of Victoria, and to provide sufficient water for diversions of supply for irrigation and other purposes.

A description of these works is given in *The Commonwealth Engineer* from which source, the following particulars have been gleaned:—

An Interstate and Federal Agreement in 1934 gave authorisation for the erection of the barrages, which were executed under the direction of Mr. E. R. Lawrie, the engineer in charge with Mr. H. G. Oliver as resident engineer. The designs for the various structures were prepared by the staff of the Engineering and Water Supply Department of South Australia under the supervision of the former Engineer-in-Chief, Mr. J. H. O. Eaton and his successor Mr. H. T. M. Angwin, and subsequently approved by the River Murray Commission.

Governing Conditions of Design

The conditions governing the design of a barrage usually require the structure to withstand the water pressure from one side only, but the River Murray barrages are unique in this respect, as they are required to withstand pressure from both sides. This is brought about by the fact that they are in tidal waters, and it is possible for the tide to rise above the level of the lakes, with the result that at periods of high tide, the structures will prevent ingress of salt water to the lakes and at other times retain the fresh water in the lakes. They are also required to allow a flood to pass without raising flood levels in the lower river.

The barrages, which are now in use, span the Goolwa, Mundoo, Boundary Creek, Ewe Island and Tauwichee Channels. Each has been designed to suit the particular foundation conditions. The three first-mentioned structures will regulate the level in Lake Alexandrina by means of the stoplogs in the sluiceways, whereas the remaining two will be closed except during floods or periods of high river.

Constructional Features

The total cost of all barrage works is slightly less than £750,000, of which the Goolwa Channel barrage absorbed one-half. This barrage, which is 2,075-ft. long, comprises the most important section of the work and was carried out in two separate cofferdams. A factor contributing to the relatively high cost is the greater depth of water in this channel, which takes approximately 70 per cent. of the river flow. The foundations are in fine sand and silt into which 4,770 wooden piles up to 40-ft. in length were driven to support the superstructure. These foundation piles are driven on a batter to provide a factor of safety against overturning, and a line of inter-locked steel sheet piling 40-ft. to 45-ft. in depth was driven along the centre line for the full length to prevent water leaking under the structure. On top of these piles, a concrete floor, varying from 30-ft. to 42-ft. in width and 3-ft. in thickness has been placed. This in turn supports a series of concrete piers, 122 in number, with vertical grooves to receive the specially designed stoplogs which can be placed in position or removed as required.

A lock chamber 100-ft. by 20-ft. is provided to pass fishing and pleasure boats, and a specially designed navigable pass has been constructed for larger vessels such as river steamers, if required. As a protection against scour, substantial stone protection is provided on each side

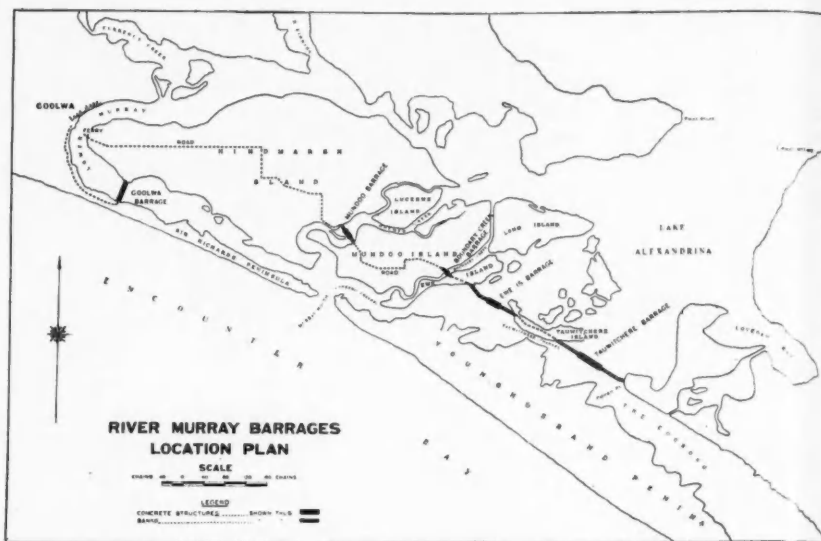


Fig. 1. Plan showing location of barrages.

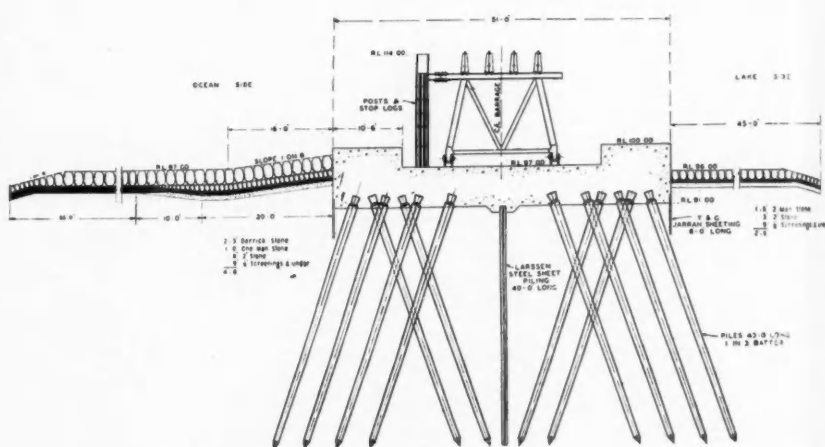


Fig. 2. Goolwa Barrage: Section through Navigable Pass.

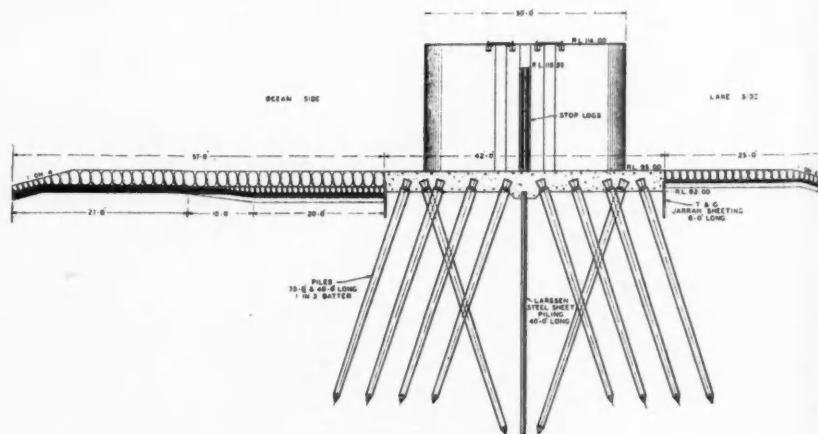


Fig. 3. Goolwa Barrage: Section through Sluices.

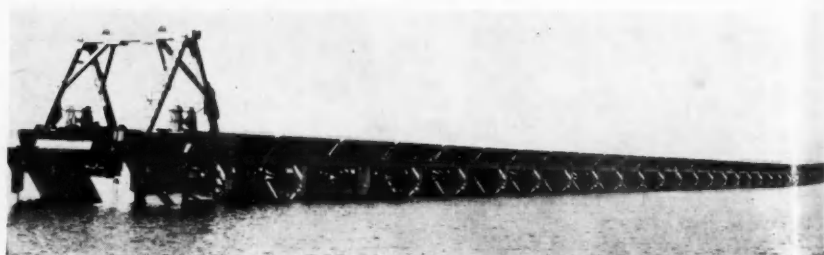


Fig. 4. Ewe Island Channel Barrage: Taintor Gates in raised position.

Barrages across the River Murray, in South Australia—continued

of the structure. The movable portions will be operated with a travelling crane on a trackway over the structure. To cross the lock, a swing bridge is provided.

The Mundoo Channel Barrage is built across the Mundoo Channel between Hindmarsh and Mundoo Islands on a calcareous sandstone reef. The length is 2,600-ft., mostly in relatively shallow water. The structure is formed partly of earthen embankment protected with heavy stone pitching, and partly of concrete sluices with movable stoplogs similar to those in the Goolwa Channel. No foundation piles were required in this case, as the sandstone reef is of good bearing capacity. The cost of this structure is £64,575.

The Boundary Creek Barrage is similar in design and construction to that at Mundoo, and is also founded on a sandstone reef. The total length is 800-ft. and the cost £10,625.

Ewe Island Barrage

The connecting link between Boundary Creek and Ewe Island barrages is a roadway 2,800-ft. in length across Ewe Island, the crown of which is at pool level of the lake. During high floods, this island is inundated and the road will be submerged. In both the Ewe Island and Tauwichee Channels, there are wide expanses of shallow water and the line selected for the barrages in both channels follows a sandstone reef, which provides suitable foundations and resistance to scour. A variation in design from that of the Goolwa and Mundoo Barrages was necessary, so that a large number of openings could be operated by a small staff in a comparatively short time. The Ewe Island barrage is not designed for fine regulation of the level of the lake, as the gates will mostly be closed or fully open, the latter condition applying during periods of flood or high river.

The barrage is built partly of earthen embankment protected by stone paving and partly of concrete sluices. In the latter section, a concrete slab 44-ft. in width with cut-off walls, is built on the rock, and piers at 14-ft. centres have been erected to carry the track for the operating crane and the hinges for the gates. The type of gate selected, of which 111 are used, is known as the Taintor radial gate, and an all steel welded design was adopted. The hinges are built into the concrete piers, and when in position the bottom edge of the gate rests on the concrete floor, the water seal on both sides and on the bottom being made with flexible rubber strips. The total length of the Ewe Island barrage is 7,450-ft. and the cost £87,480.

A roadway across Tauwichee Island, 5,725-ft. in length which will be submerged during high floods, connects the Tauwichee barrage with the Ewe Island barrage. The general design of the Tauwichee barrage is similar to that of the barrage at the Ewe Island Channel, but it is a much larger work and ranks second in that respect to the main structure of Goolwa. The total length of this barrage is 12,000-ft., which includes 4,525-ft. of concrete work on which 322 Taintor gates have been installed. A lock 45-ft. by 12-ft. 6-in. is provided in this structure, so that fishing and pleasure craft on the lake may have access to the Coorong from Lake Alexandrina. The cost of this barrage is £209,350.

The principal dimensions of the five barrages and quantities included in construction are given in the accompanying table.



Fig. 5. Goolwa Barrage: Looking upstream and showing completed piers in foreground. (Photograph by courtesy of K. P. Phillips, Adelaide).

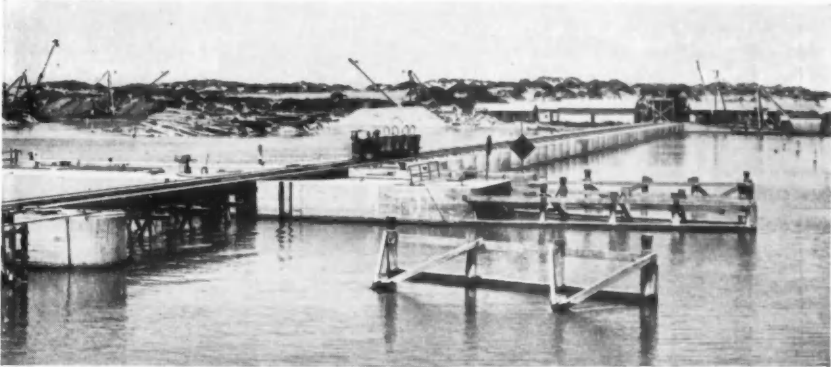


Fig. 6. Goolwa Barrage: Looking downstream and showing navigable pass, locks and piers. (Photograph by courtesy of K. P. Phillips, Adelaide).



Fig. 7. Mundoo Barrage: Concrete Sluices.

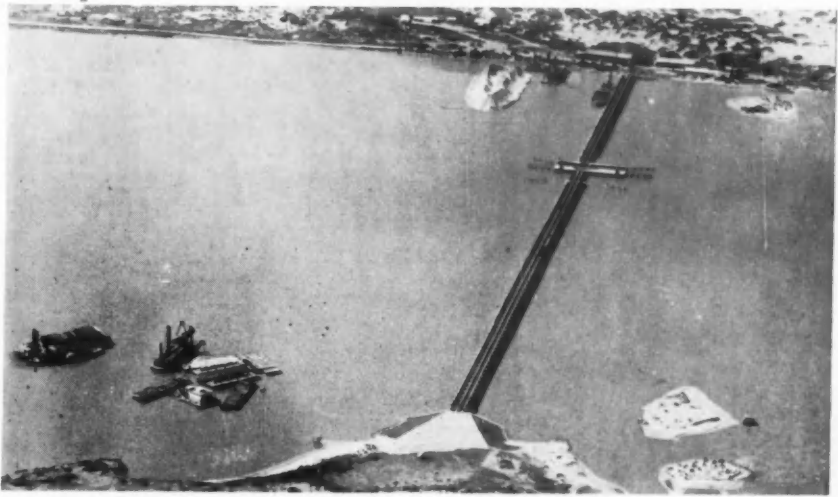


Fig. 8. Goolwa Barrage: Aerial view of completed structure. (Photograph by courtesy of Bond's Australian Scenic Motor Tours, Adelaide).

	Goolwa Channel Barrage	Mundoo Barrage	Boundary Creek Barrage	Ewe Island Barrage	Tauwichee Barrage
Total Lengths of Barrage	2,075	2,600	800	7,450	12,000
Timber Piles	4,770	—	—	—	—
Steel Piling	1,050	—	—	—	—
Concrete	17,720	2,948	449	4,216	12,755
Steel Reinforcement	770	106	23	210	567
Stone Protection	24,450	8,610	9,714	19,711	30,145
Jarrah	216,581	20,508	45,484	95,484	278,772
Excavation	59,710	2,587	559	4,796	17,486
Earth Embankments	—	17,450	5,123	47,750	67,600
Cost...	£375,000	£64,575	£10,625	£87,480	£209,350

Road Transport at the Port of Liverpool

An important organisation for the transport by road of incoming and outgoing cargoes has recently been originated and developed at the Port of Liverpool.

As explained in a leaflet prospectus, which has been issued, it is a free working partnership of cartage and motor haulage contractors which undertakes to:—

- (a) provide, in an organised manner, all the road transport required for the rapid and efficient clearance from the Liverpool quays of foodstuffs and other goods which come under the control of Government departments;
- (b) render accounts for work done and distribute the proceeds amongst the carriers who have loaded vehicles for the Control.



Vehicular Transport at Liverpool Docks.

Management and Capital

The organisation is under the control of a board of nine experienced directors who have been nominated by local road transport organisations and who give their services gratuitously.

They settled the lines of policy by which during the six months ended June, 1941, about £265,000 was paid to vehicle owners, the estimated value of the commodities carried during this period being in excess of £35,000,000.

The circumstances leading up to the formation of the Control are best explained in chronological sequence. Incidentally, the issued capital (£90) was just barely sufficient to defray the company's formation expenses.

Initiation

In the early days of the war much difficulty was experienced by the Port Emergency Committee in securing vehicles to clear certain goods from the Liverpool quays. The representative of road transport on this Committee came to the conclusion that it should be the function of the haulier to clear from the quays goods coming under the control of the Committee, and not the warehouse owners who would have the storage of this produce and merchandise. In May, 1940, he created and maintained under his own jurisdiction an embryo organisation from which emerged a properly constituted Committee, composed of practical haulage men fully conversant with local conditions, able to tackle energetically the more expeditious and efficient clearance of the congested quays. This initial Committee was appointed by the Liverpool Cart and Motor Owners' Association Ltd., which advanced as a loan £250 to speed on the work. That money was required to finance initial obligations including the engagement of an Operating Manager.

Under the title of the "Emergency Transport Control," this Committee got to work quickly and effectively and the congestion on the quays was steadily and persistently reduced. As the local

cartage section developed, the Port Food Movement Officer and the Transportation Officer of the Ministry of Supply entrusted to the Control much local cartage work on behalf of their respective Ministries.

So beneficial were the results achieved that the Regional Transport Commissioner visualised the greater usefulness of the Control. He invited representatives to meet him at Manchester, and in anticipation of events demanding the sudden transfer of traffic from rail to road, suggested the expansion of its activities to include the conveyance of Government-controlled traffic, not only to local, but to up-country, destinations. He advised the Committee to enlarge its resources and contacts by co-opting nominees from the local branches of Associated Road Operators and the Commercial Motor Users' association. This was done. On 13th August, 1940, the enlarged Emergency Transport Control was succeeded by the present private limited company, the Port

of Liverpool Road Transport Control Ltd., went with a nominal capital of £500 divided into £5 shares.

The change-over was as smooth as a ship gliding down a well-greased slipway into a waterway. Immediately, the company plunged into the serious work of intensively organising road transport for urgent war duties, and the organisation has become the pattern upon which similar "controls" have been set up in many other centres.

The Board

There was a board of nine directors under the chairmanship of Mr. J. Harper.

The directors meet frequently—almost weekly—and decide matters of policy, procedure, operation, rates, etc. These meetings are not wholly private; they are regularly attended by the Road Transport representative on the Port Emergency Committee, the Ministry of War Transport's District Transport Officer, the Ministry of Food's Port movement Officer, and other interested persons.

A policy of "open membership" was decided upon at the outset. This renders it possible for the Control to place tonnage with any member of the road transport industry, and to accept offers of suitable vehicles from any source. Maximum flexibility is thus assured. This is a paramount consideration in view of the day-to-day fluctuations in the volume of really urgent traffic.

Jobbing Prohibited

It was clear at the outset of the company's activities that more direct methods than had hitherto been employed would have to be introduced to speed up the delivery of goods from the Port. Amongst the first of the Control's long-distance jobs was the mobilisation of lorries to take 400 tons of bacon to London. Existing facilities were inadequate, but what made things worse was the fact that certain firms endeavoured to make private profit from the consignment without assisting in its clearance. This block of traffic was passed to one firm at 37/6d. per ton, less 5 per cent. Then it was discovered that this contractor was endea-

Road Transport at the Port of Liverpool—continued

vouring to sub-let by inviting hauliers to carry the bacon to London at 26/- per ton less 12½ per cent. It is not surprising that the vehicle-owning section of the industry refused to co-operate in the job.

Confidence had to be restored. The directors then laid it down as a cardinal point of policy that they must retain control of traffic which the organisation originated. At this time the Control had no long distance office. In order to cope with much additional work, a director volunteered to take charge of its long distance operations with the help of staff loaned from Liverpool operators. As efficiency was not promoted by the work being divided between the already congested office of the Secretary and the office of this particular director, a Long Distance Traffic Office, staffed by a Manager, a dockman and a clerk, was opened on 22nd October, 1940. As tonnage increased additional appointments were made until, at the time of this report, the total paid staff in all departments numbered 63.

Handling Long Distance Traffic

The handling of all traffic is pre-planned in order to secure the utmost economy in labour and machine-power. Through the agency of the Control, goods road transport has been organised on the lines of a public utility service for all classes of goods needed to promote the success of the war effort.

When orders are received from Government Departments at the Control office, the work of planning for the removal of the goods is put in hand immediately and, in the case of goods from a ship, a dockman is appointed to that ship to take charge, as a direct representative of the operating office, of all the Control's operations on the quay during the discharge of the steamer.

The dockman reports to the office as to the landing position of the particular portion of the ship's cargo for which the Control has received removal instructions, and receives from the office, at appropriate intervals, the requisite number of machines that will insure removal of the goods from the quay as rapidly as they become available on discharge from the steamer. As the vehicles are loaded, drivers are given their consignment notes by the dockman so that they may immediately proceed on their journey without having to return to the office.

Although the speed of removal of goods from the quay is kept up with the requirements of the particular Importing Department, the tempo of removal must always be regulated by the rate of intake at the reception depots inland. It is a fact, and one in which the Control takes pride, that whenever necessary the organisation can, without difficulty, remove goods from the quay as fast as they are landed from the ship.

The Control accepts full responsibility over the whole of the movement of any parcel of traffic entrusted to it, and does not sub-let to individual parties, except in direct vehicle loads. Each load is covered by a consignment note issued by the Control.

In the allocation of traffic to road vehicles no preference is given to any firm or group of firms; each vehicle is treated separately and takes its place in turn for loading in the order in which it reports to the dockman in charge on the quay, each driver being provided with an order on this man by the operating office.

Home Loading

Providing non-local operators with return loads to their home bases has been a prominent feature of the Control's work. The many advantages of this method of operation to the owner are obvious, and the opportunity thus afforded for the proper servicing of vehicles is particularly appreciated. Through the instrumentality of the Ministry of War Transport's country-wide organisation, operators in outside towns are induced to arrange their home loading from Liverpool through the Control. On one day alone no less than 1,500 tons were dealt with by "home loading."

Arrangements have been made, and are being extended, whereby the Control addresses calls for outside vehicles to "contact offices" in various areas throughout the country. By this means it is possible to obtain expert local knowledge of prevailing conditions at reception points, and assistance is invoked in correcting, from time to time, the rate of intake.

Rates, Payments and Surplus

In the early part of 1941 the Control's rates structure was carefully examined in conjunction with the Rates and Charges Section of the Ministry of Food. An agreement was reached on the charges then existing and a policy adopted as to the basis of future charges. This method of pricing haulage is now standard for all long-distance traffic carried through the Control.

The Control works to the principle of clearing its indebtedness to the individual haulage contractor within approximately four weeks from the date of carriage of the goods. To render this possible the Control has to rely on the close co-operation of the employing Ministries. Quick settlements are an indispensable condition of every efficiently organised transport unit.

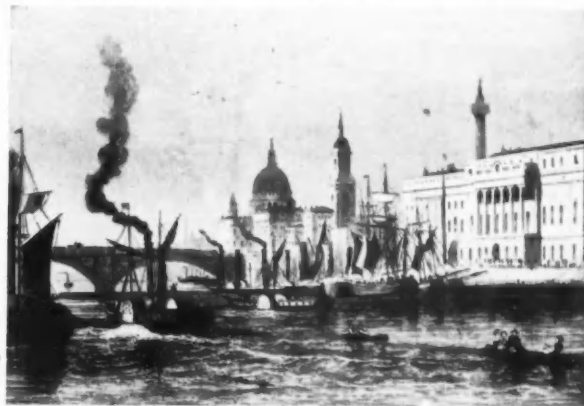
An entirely new accounting system was inaugurated on 1st March, 1941. Statements are now rendered daily and a weekly summary sent to the individual sections of the employing

Ministries. Payment is received on this weekly statement in respect of jobs which may actually carry on for one or three, or even more weeks. From carriers' accounts 5 per cent. is deducted to cover administrative and management expenses. Any surplus after meeting these is returnable to the vehicle owners on the winding-up of the Control or, if means can be devised to do so and the financial position warrants it, an interim distribution may prove possible.

The Registered Office of the Control is 20, Chapel Street, Liverpool.

Publications Received

The **P.L.A. Monthly** for November contains some interesting articles, one on "Forgotten London Shipowners," by Mr. F. C. Bowen, whose name will be recognised as that of an occasional



The Port of London in the early days of steamships (1839).

contributor to this Journal. An interesting accompaniment is a photographic view of the Pool of London in the early days of steamships (1839). By kind permission we are enabled to reproduce it here.

The Regional Port Director for the North Western Area (Mr. J. Gibson Jarvie) had a happy inspiration when he started his "Broadsheet for Dockers" under the title of **The Hook**, which is issued at irregular, rather less than monthly, intervals and contains items of interest with encouraging advice to workers in dockland. Particulars are given of creditable and record performances in the expeditious handling of cargoes, combined with photographic illustrations showing dockers engaged in some of the more strenuous operations which fall to their lot. So little journalistic limelight falls upon quayside workers and their doings, that this publishing enterprise is all the more to be appreciated, providing, as it does, an incentive to greater and more sustained effort in the national cause, for which it deserves every commendation.

The issue for November 6th, which is the latest to reach the office of this Journal, contains the following appeal to the men: "Help us to make **The Hook** the Voice of the Ports," in fact as well as in name; let us use it as a means of keeping in close touch with each other, airing our grumbles when they come along, sharing our knowledge, our news and those everyday little things which have interested or amused us. It will all help to bring nearer that bigger thing we are going to share . . . Victory."

The **Bulletin** of the **Institution of Sanitary Engineers** for October, in addition to the usual membership and general notes, contains a Paper of considerable length on the Theory of Surface Water Drainage by Mr. L. B. Escritt, illustrated by a number of charts and diagrams.

Texan Internal Waterway Development.

The United States War Department have recommended to Congress the expenditure of \$114,500,000 on a project for extending navigational facilities on the Trinity River, Texas, and the extension of the Louisiana-Texas Intracoastal Canal from the port of Corpus Christi to the Rio Grande Valley.

Report of Cardiff Dry Dock Undertaking.

The report of the Directors of Mount Stuart Dry Docks, Ltd., Cardiff, shows that for the year ended March 31st last, after payment of interest on the First and Second Debentures of the company, making provision for excess profits tax and war damage contribution, transferring £5,000 to contingency account (same as a year ago), and £25,000 to the reserve account for taxation (£24,000), there remains a profit of £26,239 (£31,177), which, added to the £27,764 (£18,437) brought forward from the previous year, leaves £54,003 for disposal (£49,614).

American Cotton at the Port of Bombay*

Import and Fumigation Process

Cotton is a power in the Southern States of the U.S.A. The fleecy staple dominates markets, corporations and households. It is a theme with authors and playwrights, and on the silver screen; it has been set to music and glorified in song. The silky fibre ranks next to the black gold of the oilfields as the chief money value of these States. It outstrips all other products of the land; but it is a commodity the farmer cannot consume, store or convert. It must therefore be marketed, and is cleared for cash.



Boll Weevil (Magnified).

Millions of dollars change hands each season. Credits are met from cotton dollars, and so are taxes and loans, wages and freight, when the bales begin to move. Cotton as a crop is not amenable to modern industrial processes. Indeed, the best cotton pickers are still ten nimble little fingers, whilst the cotton gin with all its improvements, is still the machine Whitney invented 150 years ago, and the staple's chief markets are still beyond the Seven Seas. Systems of land holdings have changed, transport revolutionised, knowledge of stocks, markets and consumption more widely propagated; but the seed and the soil, the tree and the boll, the combination of the first pair for the production of the latter have altered little, if at all.

Association with Port Trust

It is not generally known, or sufficiently appreciated, that the vicissitudes of the American cotton industry during and after the Civil War of 1861 are intimately connected with the history of the Bombay Port Trust. The withdrawal of the American crop from the markets of the world led to a tidal wave of prosperity in the Indian Cotton Markets and industries. Speculation was rampant, shares rose to unparalleled heights, and various land schemes, such as the Elphinstone Land and Press Company, the Colaba, Apollo, Mazagon and Frere Land Companies, were floated with the newly-acquired wealth, and, of course, competed, like mushroom Port Trusts, with each other. When hostilities ended, the tide turned, and most of the syndicates were left high and dry both in regard to finance and land development. The depression rightly led the Government of India to purchase these land concerns and merge them into the hands of a public body, to be called the Bombay Port Trust. Indeed there is a silver lining to every cloud!

The American Crop

Now as to the North American crop itself. During the last 30 years, the average annual yield has been in the neighbourhood of ten million bales of 500 lbs. Bumper crops were raised in 1914, 1925-27, 1932 and 1938, when over 16 million bales were marketed each season. In 1938 the reckoning was nearly 19 million, whilst the whole world crop touched 37 million. The chief cotton ports of the States are New Orleans, Galveston, Houston, Mobile and Los Angeles where the bales are weighed, both sides cut, and samples extracted for classification before shipment. The South American Republics also grow cotton, and produce over 3 million bales, of which a half is sent over the seas. India is the second largest cotton growing and exporting country in the world, with a yield of over 5 million bales of 400 lbs. weight, of which at least 2 million crosses the Indian Ocean, mainly to the Far East. While a half of the American crop finds its way to Europe and Japan, India took over a lakh of bales from the United States in the good years, and as many as 2,23,000 bales touched Bombay in the boom of 1932. The largest importations are of the Californian variety, shipped from Los Angeles. Imports from South America have however been on a rather modest scale, but Egypt, the Soudan and Uganda, which are nearer, send quite large and regular shipments every year. Cotton from the States is of the best quality with a long fleecy staple and being available in great volume, it is indeed the arbiter of the cotton markets and exchanges of the universe, as well as of the destinies of the States in the Mississippi region. Three types of bales are ginned. There is a square bale of only 12 lbs. density per cubic foot, which however has a density counterpart of 27 lbs., the bale which is commonly exported to the East, and lastly an ACCO Round bale of 35 lbs. density and only 250 lbs. in weight, which can be rolled by one man, whilst two bales occupy less space than an ordinary high density one.

*Reproduced from the Port of Bombay Quarterly Magazine. July-September, 1940.

Ravages of the Boll Weevil

Until about 15 years ago, American cotton was landed freely anywhere in the Bombay Docks and was stored in the open areas, the larger portion of it having been transhipped at European or Mediterranean ports. Direct shipments were few and far between, but to-day through sailings from the cotton ports with full loads of 20,000 bales are a common feature in a prosperous year. Importations before the Great War of 1914 averaged 26,000 bales yearly, but in 1920-21, arrivals were heavy. By now, the depredations of the boll weevil into the American crop had been well established and recognised. This insect next to deficient moisture, causes the severest curtailment in the yield of cotton. The boll weevil is therefore public enemy number one of the cotton grower. It is believed to have crossed the Rio Grande from Mexico towards the end of the last century, and has since multiplied and behaved like a bandit over almost the entire cotton belt. The worm punctures the green boll and ruins its development. Incidentally, it may be stated that a monument was erected to the boll weevil in Alabama "to honour the bug which forced farmers to diversify their crops" Verily, out of evil, cometh forth good.

However, to counteract the risk of damage the activities of this pest would inflict on this country, the Indian Central Cotton Committee urged the Government of India in 1923 that all arrivals of American cotton should be fumigated at the port of entry with hydrocyanic acid gas. This fumigant was selected, as it was in use in America, and was found to leave no harmful effects on the spinning, dyeing and bleaching properties of the staple. An examination of the commercial side of the question led to a decision to disinfect the cotton in barges. From December, 1925, when the fumigation notification came into force, till January, 1927, 1,90,000 bales of the American variety, and over 12½ lakhs up to date, have been treated in this way in Bombay, which is the only port in India where facilities to do so, exist. The Collector of Customs, Bombay, is the fumigation authority of the Port, but the work itself is entrusted to the Bombay Port Trust on behalf of Government.

Fumigation Process

The process of fumigation, which has so far been applied to shipping, belongings and pilgrims, and not to a compact article like a bale of cotton, is of undoubted interest. When a vessel carrying American cotton enters the port, fumigation barges, of which there are 22 in use, are requisitioned by the ship from the Docks Manager, and are sent alongside by the lighterage contractor to receive the bales. The barges, having been loaded, are towed to the fumigation wharf. At the outset, this work was carried out at Haji Bunder, at the north end of Bombay. Owing to a lack of landing facilities and storage accommodation, apart



Types of American Cotton Bales.

from the isolated and forbidding nature of the surroundings, the operation was transferred to Prince's Dock before the monsoon of 1926. The Liston fumigating machines are utilised for the work, and are under the supervision of the Government Fumigation Officer deputed to the wharf. They are placed on the deck of the barges, whose hatches are closed, and encased in specially prepared gas-tight covers, the fumigation pipes being arranged within. Hydrocyanic acid gas is prepared in the machines by the action of sulphuric acid on sodium cyanide, and the gas pumped inside through pipes. After the first charge, the concentration of gas is taken, and if found to be low, another charge is given, the concentration being raised in this way. It is kept at the required strength for six hours from the time of starting the machines, and then left overnight. Early next morning the hatch covers are removed and aired, and the bales exposed for a few hours to be freed of all traces of the gas. Unloading then commences. When arrivals are unusually heavy, auxiliary barges for carrying the cotton from the ship to the fumigation wharf are requisitioned. The plant at present in use in Bombay is capable of dealing with close on 3,400 bales daily.

American Cotton at the Port of Bombay—continued

Storage and Delivery

A brief account of the storage and delivery side of these operations is as follows:—Fumigated cotton is stored in the American Cotton shed at Prince's Dock, when the consignments are below 3,000 bales. When shipments are heavy, F. H. and the Jetty Sheds which hold 15,000 bales between them, are also utilised, and as far as possible the cotton is placed under cover. It is tallied, sorted and stacked by shipping marks, sampled and sealed by the consignees before they effect delivery. The Customs Officer at the shed checks the clearing documents with respect to the fumigation of the bales. Wharfage, fumigation and watching fees are recovered before the lots are cleared. Dock dues for the lighters are met by the lighterage contractors, Messrs. Cooper Landing Company, who, it may be stated, have never been found wanting in the supply of lighters, their transport and in their general responsibilities for the work. When abnormal and concurrent shipments of the staple arrive in port, other berths in the docks are absorbed for the landing and storage of unfumigated cotton, that the lighters may be released expeditiously and the vessels receive despatch. No. 17 berth and "E" Warehouse, Alexandra Dock, have been used for this purpose in the past. These areas were, of course, notified as quarantine berths for the receipt of unfumigated cotton only. As fumigation proceeded, the bales were re-loaded into lighters, to be treated likewise, and subsequent discharge in Prince's Dock; a charge being made to cover the cost of the additional service.

There are some aspects in the procedure laid down for the fumigation of American cotton which are of general interest to all importers. The Government Notification specifies that all cotton consignments, other than American, which have come in contact with the latter, by being stored with or in the same hatch of the on-carrying vessel, must also be fumigated. Further, that shipments of African or any other cotton stowed in a different hold from the American variety, will be given a certificate from the Port Trust, after actual inspection, that the former has not been in contact with the latter. It may be stated, as a matter of information, that the fumigation fee is Rs. 2-7-0 for a square bale, with a minimum charge of Rs. 150 for a consignment. Re-shipment and transshipment of American cotton to other Indian ports after fumigation also require a covering certificate from the Trusts' officials; whilst samples of the staple under 20 lbs. in weight may be removed by the consignees direct from the ship to the Customs House for fumigation. Ten days' notice of expected shipments, before the vessel's arrival, are required to be given by the consignees. No discharge of cotton from a vessel during a shower of rain or even a drizzle is permitted, and all cotton during the period of landing, transshipment and fumigation lie at the sole risk of the importers. Messrs. Anderson, Clayton are the leading American Cotton House in Bombay, and Messrs. Volkart Brothers, Ramnarain and Sons, Gill and Co., Patell Cotton Co., Ltd., and Ralli Brothers are among the chief importers.

Fire Precautions

A few words are necessary to briefly recapitulate the fire precautions adopted in the docks when cotton is being discharged for storage and clearance. Dock fire ladders with lengths of hose and stand pipes fixed in position, as well as watchmen, are provided for each shed in which the cotton is stacked. The doors of the sheds are kept open day and night, and special police precautions are taken. Each shed is served with a telephone and there are telephone fire alarms within 100 yards of any of them. It has been stated that a piece of metal in the seed cotton or a match coming in contact with the gin saws starts a spark in the bale, which is compressed at the gin, and smoulders for a month before it eats its way to the surface and bursts into flame. The red flame of disaster is therefore a constant menace, and calls for continued vigilance and care from all parties.

Before concluding it will not be out of place to touch on the influence American cotton wields in the markets of the world. It has been stated before that the predominating size of the crop controls the price of cotton on the markets and on the exchanges of the universe. It reacts on Wall Street, New York, and Wall Street arbitrates for the rest. It flashes futures to Liverpool and the bulls and the bears, the brokers and the boys rant and rave, buy and sell, hedge and call, and before they can corner or be cornered, a few go over the precipice. Fortunes may come, and fortunes may go, but cotton futures go on for ever. That hackneyed phrase: "What is to-day's figure" is a direct offshoot of the staple, even if the latter disowns it, and whether it is the opening or the closing or both, the appeal to the rich, the not so rich, and the rest—men and women, master and servant, though the latter has "borrowed" the money to cover it—to repeat, the appeal to speculate is irresistible. It may be a fortune, a flutter, or a finish in the end, withal the American crop is a power to be reckoned with. The "white gold" of the States indeed holds its own and will continue to do so, as long as there are two parties to a bargain and a stake and a gamble are part and parcel of the fibre and the fellowship of mankind.

E. J. K.

Legal Note

Taxation Value of a Grain Silo

Under the above heading, there was recorded in the March 1941 issue of this Journal the judgment given by the Recorder of Belfast concerning the valuation of a grain silo at Belfast Harbour, in connection with which it was claimed that the silo should be classed as a freight-transport hereditament by reason of the fact that the business was wholly under Government control. The Recorder dismissed the appeal, holding that the silo did not comprise, as part thereof, a dock.

The case was taken to the Divisional Court which decided that the Recorder's ruling was incorrect.

It is now reported that the Northern Ireland Court of Appeal has reversed this decision and awarded costs against the respondents. The Lord Chief Justice, concurring with the original judgment of the Recorder of Belfast, held that the hereditament was not occupied, or used, as part of a dock undertaking within the meaning of the Act, and therefore should not be distinguished as a freight-transport hereditament.

The valuation mentioned in the case was £1,925.

French Ports and Waterways; Budget Provision in 1941

Details of the French Budget for 1941 have recently been published in the *Journal Officiel*. The following particulars relate to subsidies allocated to the development of navigation:—

Substantial sums for work at ports and on inland waterways are provided in the budget of the Ministry of Communications. The items include: 80 million francs for ordinary maintenance and repair of inland waterways; 330,000 francs for extensions at the port of Strasbourg; 74 million francs for maintenance and repair of seaports; 16,500,000 francs for maintenance and repair of lighthouses, buoys, etc.; 9,945,500 francs for subsidies to autonomous ports; 164 million francs for clearing and reconditioning canals and rivers; 65 millions for equipment of waterways; 100 millions for improvements to inland waterways; 200 millions for equipment of seaports; 90 millions for extension and improvement of seaports; 30 millions for extension and improvement of fishing ports; and six millions for extension and improvement of lighthouses, buoys, etc.

Mersey Docks Board Staff Changes

Retirement of Engineer-in-Chief

The retirement, under age-limit regulations, of **Mr. Tom Lord Norfolk**, M.Inst.C.E., from the position of Engineer-in-Chief to the Mersey Docks and Harbour Board, which he has held since 1928, took place at the end of October. In the course of his long service, including that as Assistant Engineer between 1914 and 1928, Mr. Norfolk had extensive responsibility for the maintenance of the dock facilities and plant and in the design and construction of improvement works at the port, some of which have been described in this Journal, one recent notable instance being the re-modelling of the West Waterloo Dock Entrance (vide issue of September, 1937).

Mr. Norfolk is succeeded in the chief engineership by **Mr. Leopold Leighton**, M.Inst.C.E., hitherto chief assistant. Mr. Leighton was first appointed on the staff of the Mersey Dock Board in 1914, having previously served on the London and North Eastern Railway Docks at Hull, where he was engaged on the construction and equipment of the King George Dock.

Obituary

The death in retirement is announced of **Mr. Philip Lowry Rusden**, for over twenty years manager and secretary of the Mercantile Pontoon Company, Ltd., Cardiff. Mr. Rusden had a long association with Cardiff graving dock undertakings and with ship repairs, having previously been with the Bute Dry Dock Company, a concern which, with the Mercantile Pontoon Company, became merged in the Channel Dry Dock Company. Mr. Rusden retired from active work nearly twenty years ago.

The death is also reported of **Mr. Reginald Charles Miller**, M.I.E.E., who succeeded Mr. H. Wauchope as electrical engineer at the Southern Railway Docks, Southampton. Mr. Miller had only held the appointment since February, 1940, but as principal assistant to Mr. Wauchope, he was closely concerned in 1924 with the conversion of all pumping stations at Southampton Docks from steam to electric drive, and, subsequently, with the electrical work in connection with the King George V Graving Dock, and the supply of electric power to the entire dock system.

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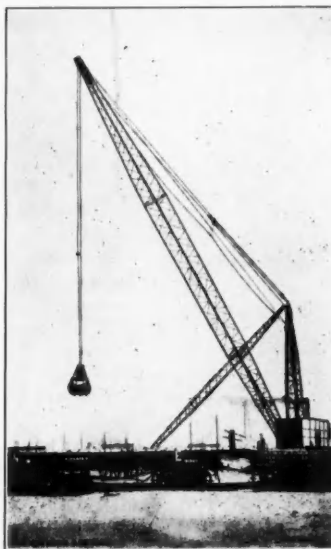
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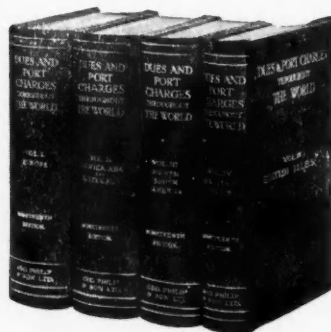
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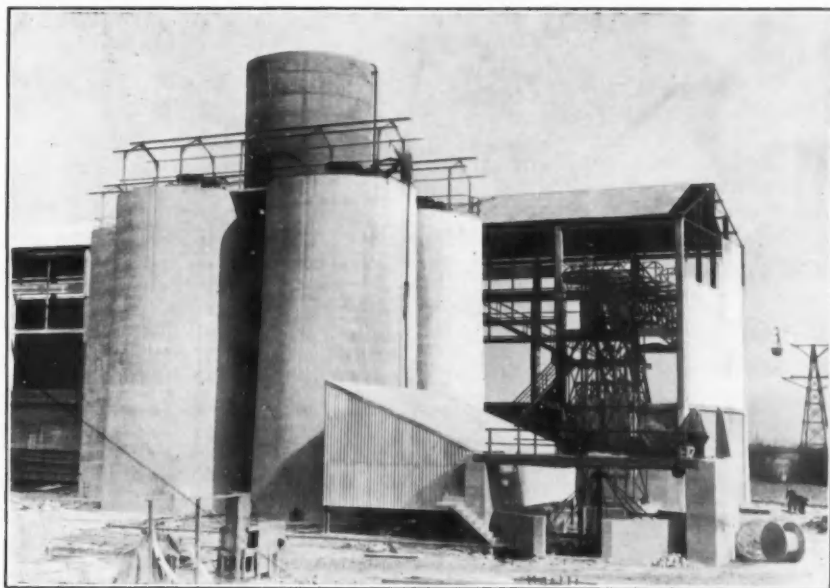
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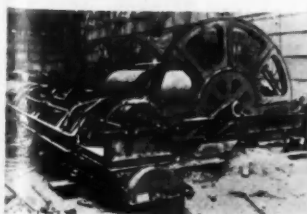
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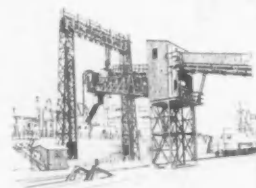
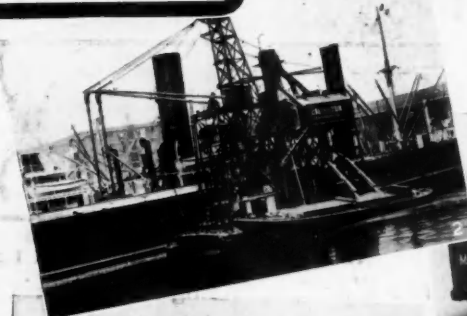


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